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The determination of the rate of advancement of special needs students within Chapter 766 prototypes 502.1-502.4 in selected vocational and comprehensive school systems.

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University of Massachusetts Amherst

THE DETERMINATION OF THE RATE OF ADVANCEMENT OF SPECIAL NEEDS STUDENTS WITHIN CHAPTER 766 PROTOTYPES 502.1 - 502.4 IN SELECTED VOCATIONAL AND COMPREHENSIVE SCHOOL SYSTEMS

A Dissertation Presented

By

SUMNER ROTMAN

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Approved as to the style and content by:

Kenneth A. Parker, Chair

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Frank Lattuca, Member

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School of Education

DEDICATION

This dissertation is dedicated to my wife, Grace Diamond Rotman, whose love and support made this study possible and also to my children, Reuben and Miriam for their continued support and encouragement during my doctoral program.

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ABSTRACT

THE DETERMINATION OF THE RATE OF ADVANCEMENT OF SPECIAL NEEDS STUDENTS WITHIN CHAPTER 766 PROTOTYPES 502.1 - 502.4 IN SELECTED VOCATIONAL AND COMPREHENSIVE SCHOOL SYSTEMS

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Statement of the Problem

The problem addressed in this study is whether special needs students progress in their prototype designation faster in a comprehensive or vocational school system. This issue is critical because within the past ten years an increasing number of special needs students have become a sizeable percentage of the students in vocational school systems.

Methodology

The methodology utilized in this study was the survey method. An instrument was mailed to 65 randomly identified comprehensive school systems and 65 vocational school

systems. The computer language BASIC was used to generate the list of comprehensive school systems. A vocational school system is identified as one which has five or more vocational course offerings. The approach was to utilize the "sample of the whole" method. There are 65 identified vocational school systems in the Commonwealth of Massachusetts.

In addition to the utilization of the survey instrument, the researcher conducted on-site interviews in six school systems; three comprehensive and three vocational. These were chosen due to their marked tendencies of significant movement of special needs students from the prototypes of 502.1-502.4. The on-site interviews was also undertaken to supplement the data generated by the survey instrument.

Results

The survey generated responses from 13 comprehensive school systems and 19 vocational school systems. Within prototypes 502.1 and 502.2 (least restrictive) there were 8,423 special needs students from the comprehensive sector and 17,805 from the vocational sector.

Within prototypes 502.3 and 502.4 (most restrictive) there were 5,488 special needs students from the vocational sector and 4,798 from the comprehensive sector.

Conclusions

The conclusions of this study were as follows:

* Increasing number of special needs students in the least and most restrictive prototypes were found to be in the vocational sector
* Increasing number of students from the vocational sector were mainstreamed
* More students in the comprehensive sector remained in their prototypes over a four year period of time

In general, the study determined that special needs students achieved placement in the least restrictive prototype settings in the vocational delivery system at a quicker pace than their counterparts in the comprehensive sector.

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CHAPTER I

THE PROBLEM

Introduction

The intent of the 1984 Federal Vocational Education legislation and the authorizations cited in the Chapter 766 Massachusetts special education legislation sought to provide assurances that special needs students would be placed in educational settings which incorporate the maximum degree of mainstreaming. Mainstreaming is commonly identified as the least restrictive environment. This study will attempt to determine whether Massachusetts special needs students are being mainstreamed in comprehensive and vocational school systems. Specifically, this study will seek to ascertain whether special education students are assigned to a least restrictive setting at a faster rate in comprehensive or vocational school systems. Such a determination would enable educational policy makers and planners to focus their efforts on the particular delivery system which is more productive in mainstreaming special needs students and then apply fiscal and human resources to the particular delivery system which is more conducive and productive for the special needs student population.

The specific federal and state legislation which promotes mainstreaming and least restrictive environments are:

* PL 98-542 Carl Perkins Vocational Education Act of 1984
* PL 94-142 Education for All Handicapped Act of 1975
* Chapter 766 The Comprehensive Special Education Law Massachusetts General Law, 1972

These particular statutes each focus through quite specific language that program thrust for special education must be on achieving the least restrictive setting.

The **Carl Perkins Vocational Educational Act** states: Vocational education programs and activities for handicapped individuals will be provided in the least restrictive environment in accordance with Section 612(5)(B) of the Education of the Handicapped Act and will, whenever appropriate be included as a component of the individual education plans required under Section 612(4) and Section 615(a)(5) of such Act said...Vocational education planning for handicapped individuals will be coordinated between appropriate representatives of vocational education and special education.[1]

The **Education for All Handicapped Act of 1975** specifies: The State has established; (A) procedural safeguards as required by Section 615, (B) procedures to assure that to the maximum extent appropriate, handicapped children, including children in public or private

institutions or other care facilities are educated with children who are not handicapped, that special classes, separate schooling, or other removal of handicapped children from the regular educational environment occurs only when the nature of severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily.[2]

The **Chapter 766 Comprehensive Special Education Law** mandates: Each School Committee shall provide or arrange for the provision of each of the elements of the IEP's of children in need of special education, in accordance with the applicable provisions of these regulations, and shall take all the necessary steps to ensure compliance with all elements of the IEP's of children in need of special education. Each School Committee shall assure the maximum possible development of children with special needs provided that such children, to the maximum extent appropriate, are educated with children without special needs. Children with special needs shall be placed outside the regular educational environment only when the nature of severity of their special need is such that education in a less restrictive educational prototype with the use of supplementary aids and services cannot be achieved satisfactorily.[3]

These three sets of regulations, taken as a whole, provide evidence that children with special needs achieving the least restrictive setting is in fact, a federal and

Massachusetts state imperative. If a least restrictive environment is the best educational environment, what is the most favorable placement for them? This present study is being developed under the premise that special needs students, achieve their greater potential faster in a vocational school setting rather than in a comprehensive school environment.

Background of the Problem

This study will examine the process by which special needs students advance in their prototype designation over a four year period of time. The population surveyed will reflect those in the comprehensive and vocational school systems. The Massachusetts Division of Occupational Education and the Division of Special Education enacted in December, 1988 a State Wide Task Force whose purpose was to address the issue of the increasing number of special needs students being referred to and accepted by the vocational school system.[4] A 1989 survey by the State Wide Task Force through the efforts of the Massachusetts Vocational Technical Administrators of Special Education, is cited in Table 1.[5]

Table 1 refers to the Fall 1989 Special Needs Grade 9 Enrollment in Vocational Technical School Systems. This table of data was compiled by the Massachusetts Association of Vocational Technical Administrators of Special Education.

TABLE 1

FALL 1989 SPECIAL NEEDS GRADE 9 ENROLLMENT IN VOCATIONAL TECHNICAL SCHOOL SYSTEMS

Vocational Technical School, Location	Percent of Special Needs Grade 9 Enrollment Fall 1989-In Comparison to the Regular School Population
Minuteman Reg. Voc. Tech. Lexington, MA	62.2
North Shore Reg. Voc. Tech. Beverly, MA	45.2
Nashoba Valley Reg. Voc. Tech. Westford, MA	41.5
Blue Hills Reg. Voc. Tech. Canton, MA	41.1
Upper Cape Cod Reg. Voc. Tech. Bourne, MA	40.0
Tri County Reg. Voc. Tech. Franklin, MA	39.5
Joseph Keefe Reg. Voc. Tech. Framingham, MA	37.7
Assabet Valley Reg. Voc. Tech. Marlboro, MA	35.1
Old Colony Reg. Voc. Tech. Rochester, MA	34.2
Shawsheen Valley Reg. Voc. Tech. Billerica, MA	32.9
Smith Vocational Northampton, MA	31.1
Whittier Reg. Voc. Tech. Haverhill, MA	27.3
Blackstone Valley Reg. Voc. Tech. Uxbridge, MA	24.9
Franklin County Tech. Turners Falls, MA	24.6

TABLE 1 (continued)

FALL 1989 SPECIAL NEEDS GRADE 9 ENROLLMENT IN VOCATIONAL TECHNICAL SCHOOL SYSTEMS	
Vocational Technical School, Location	**Percent of Special Needs Grade 9 Enrollment Fall 1989-In Comparison to the Regular School Population**
Montachusett Valley Reg. Voc. Tech. Fitchburg, MA	24.6
Southeastern Reg. Voc. Tech. South Easton, MA	24.6
Greater Lowell Reg. Voc. Tech. Tyngsboro, MA	24.4
Bay Path Reg. Voc. Tech. Charlton, MA	24.3
Bristol Plymouth Reg. Voc. Tech. Taunton, MA	22.1
Diman Reg. Voc. Tech. Fall River, MA	20.4
McCann Voc. Tech. Springfield, MA	11.6
Greater New Bedford Reg. Voc. Tech. New Bedford, MA	10.8
Greater Lawrence Reg. Voc. Tech. Andover, MA	8.9

The national average of special needs students found in a general population is estimated to be approximately 12%.[6] Of the schools surveyed, only three school systems surveyed are in conformity with the national average. The data indicates that 20 regional vocational technical high schools in Massachusetts have a higher number of special needs

students as part of their entering grade 9 freshman student population in the Fall of 1989.

There are 20 regional vocational schools high schools which have a higher number than 12.6% of special needs students as part of their entering grade 9 freshmen student population and three school systems i.e., McCann Technical, Greater New Bedford and Greater Lawrence Regional which have an incoming grade 9 special needs student enrollment lower than 12.6%.

Of the 23 school systems noted in Table 1, there were an additional six vocational school systems noted in Table 2 who did not report their grade 9 special needs enrollment. However they did acknowledge their special needs enrollment for the grades 9-12 as being extremely high - well over the 12.6% national average. In addition to the six school systems noted in Table 2, there were two additional vocational high schools, namely county agricultural high schools which did report their grades 9-12 special needs enrollment as being under 12.6%.

Of the 31 vocational high schools noted in Tables 1 and 2, 20 i.e., 65% of these school systems reported grade 9 special needs enrollment well over the 12.6% and there were six i.e. 5.2% schools whose general grade 9-12 enrollment reported again well over 12.6%. Only five vocational school systems, namely 1.6% indicated that their special needs enrollment data was under 12.6%.[7]

TABLE 2

FALL 1989 SPECIAL NEEDS GRADE 9-12 ENROLLMENT IN SELECTED VOCATIONAL TECHNICAL SCHOOL SYSTEMS

Vocational Technical School, Location	Percent of Special Needs Grade 9-12 Enrollment Fall 1989
Cape Cod Reg. Voc. Tech. Harwich, MA	38.2
Pathfinder Reg. Voc. Tech. Palmer, MA	28.0
South Shore Reg. Voc. Tech. Hanover, MA	27.9
Worcester Voc. Tech. Worcester, MA	22.7
Northeast Metropolitan Reg. Voc. Tech. Wakefield, MA	20.9
Norfolk County Agricultural Walpole, MA	16.6
Bristol County Agricultural Rehoboth, MA	11.4
Essex County Agricultural Hawthorne, MA	11.4

Of the eight school systems there were only two vocational school districts which had reported their special needs student enrollments as being under 12%.

The data presented in Tables 1 and 2 documents the rapid increase of special needs students entering 1989-90 Massachusetts vocational education school systems. Similar data in a 1984 national study by Alan N. Sheppard entitled: A Policy Analysis of Professional Development and Personnel Preparations for Serving Special Needs Populations reveals a national perspective mirrored the state of Massachusetts in

an "overenrollment" of special needs students in vocational schools systems. Table 3 refers to the percentage of handicapped population served in vocational education and special education by handicap which was documented in a 1984 national study by Sheppard.[8]

TABLE 3

HANDICAPPED POPULATION SERVED IN VOCATIONAL EDUCATION AND SPECIAL EDUCATION, BY HANDICAP

	Percent of Handicapped Population Served In Special Education	Percent of Handicapped Population Served in Vocational Education
Mentally Retarded	21.8	36.5
Hard of Hearing	1.0	2.6
Deaf	1.0	0.9
Speech Impaired	29.4	2.7
Visually Handicapped	0.8	2.5
Emotionally Disturbed	8.2	7.3
Orthopedically Impaired	1.6	2.4
Learning Disabled	31.7	36.8
Deaf or Blind	0.0	0.2
Multihandicapped	1.5	4.6
Other Health Impaired	2.6	9.9

Sheppard noted the following point relative to the need for vocational instructors to receive further professional development: Comprehensive vocational education emphasizes that handicapped students should be the responsibility of regular vocational instructors, with support from special

education staff as needed by the students. In order to meet this need vocational instructors must provide sequential education, instruction and training appropriate to the needs and progress of each handicapped student. Consequently, vocational instructors must not only have the competencies, knowledge and technical skills needed to be effective in the vocational skill area, but must also possess specific competencies and knowledge needed to teach handicapped students effectively.[9]

Statement of the Problem

The problem which is addressed in this study is whether special needs students progress in their prototype designation faster in a comprehensive or vocational school system. Therefore the problem of which delivery system, comprehensive and/or vocational, is more suitable to the educational and vocational needs of special needs students is considered a researchable topic in Massachusetts by the policy makers who represent the decision makers of vocational and special education. This statement has credence because the Associate Commissioners of Occupational Education and Special Education convened a state wide task force in 1988 (Appendix A) whose sole purpose was to examine the rising trend of special needs enrollment in the Massachusetts vocational school systems.

In addition, Appendix B denotes that the intent of this study is of interest to the Association Commissioners of Occupational Education and Special Education.

Purpose of the Study

The purpose of this study is to ascertain which secondary educational delivery system; comprehensive or vocational is more suitable to the process of accelerating the special needs students to the least restrictive prototype. The final data will be shared with the members of the Massachusetts State Wide Task Force on Special Needs Enrollment in Vocational School Systems and to the professional associations who would also welcome a dialogue of this topic, namely:

Comprehensive State Wide Associations-

* Massachusetts Association of Occupational Education Administrators
* Association of Special Education Administrators
* Massachusetts Association of Home Economics Teachers
* Massachusetts Teachers Association (Occupational Education Committee)
* Massachusetts Organization of Educational Collaboratives

Vocational State Wide Associations-

* Massachusetts Association of Vocational Administrators
* Massachusetts Vocational Association
* Massachusetts Vocational Technical Administrators of Special Education

Comprehensive and Vocational State Wide Associations-

* Massachusetts Association of Vocational Special Needs Personnel
* Massachusetts Association of School Superintendents
* Massachusetts Association of School Committees

The Massachusetts Vocational Technical Administrators of Special Education in their November 7, 1988 correspondence to Dr. Mary Beth Fafard, Associate Commissioner, Division of Special Education, underscored seven timely issues relative to this problem. Their first concern in part symbolizes the purpose of this study. Their statement reflecting a concern on meeting a traditional good in vocational education reads in part: There is cause and concern over the increasing number of special education students in vocational school systems. This issue is extremely sensitive as some vocational schools are reporting 40-50 percent special education enrollment. This brings up the issue of how to integrate special education students, when so many of the students are special education. Secondly, with so many special education students, are

curriculums being weakened, therefore can we meet the mandate to supply industry with skilled vocational workers?[10]

Rationale and Theoretical Framework

In a 1988 national study entitled: The Forgotten Half, Pathways to Success for America's Youth and Young Families, a statement relative to economic success for young adults with disabilities provides a strong rationale and theoretical framework for this study.

That report cited the following data: The term 'person with disabilities' covers difficulties ranging from dyslexia to physical handicaps and severe mental retardation and requires an equally wide array of services and supports to help persons with disabilities find their own pathways to success. Of the 40 million persons in the 15 to 24 year old age group, 10% or 4 million have disabilities. Of this group, 55 percent complete high school, a stunning 62% are unemployed, and 18.8% earn under $600 per month. Compared to rates for persons without disabilities - 76 percent complete high school, 23 percent are unemployed, and 8.3 percent earn less than $600 per month - persons with disabilities constitute one of the most economically disadvantaged subgroups in American society.[11]

The inequity in education and training given to persons who are disabled and non disabled represents the bedrock and

underlying basis for this study. Until society develops a better appreciation of which delivery system is more advantageous, the above data will continue to indicate increased discrepancies of economic success, among handicapped and non handicapped youth.

Questions to Be Answered

The questions in this study which will be addressed are as follows:

* Will the special needs students from 1978-88 excel faster in a comprehensive or vocational school system?
* Will the data and the findings be useful in developing a series of recommendations which could be acted upon by the two policy makers in Massachusetts who are accountable for this population, namely, the Associate Commissioner for the Division of Occupational Education and the Associate Commissioner for the Division of Special Education?

Importance of the Study

In the body of the correspondence which the Department of Education forwarded to the members of the Massachusetts State Wide Task Force on Special Needs Enrollment in

Vocational School Systems on the issues affecting special education in a vocational technical setting, the following was stated: The three program Divisions, Occupational Education, Special Education and School Programs, of the Massachusetts Department of Education are examining the issues affecting Special Education in a vocational technical setting. These issues include the enrollment of special needs students, a potential cutback of appropriate services for special needs students and the systematic sometimes inappropriate referral of special needs students to vocational technical schools by sending schools.[12]

The foregoing statement underscores the urgency and the importance of this study. The Special Needs Task Force would express an interest in recommendations which would curtail admissions of special needs students into vocational technical settings. Such an action could come about possibly for the wrong reasons, i.e. quick response to the high incidence of special needs students in vocational school systems. This study will yield an analysis of the evidence over an 11 year period of time. Therefore the study will add considerable weight to the frame of reference and provide a more comprehensive viewpoint as to the ramifications of the issue being debated. The Associate Commissioners of Occupational and Special Education have in view of their concern and interest in this dissertation, expressed their interest in the data which will be forthcoming in this dissertation (Appendix B).

Definition of Terms

The following terms have been selected for definitions because they represent critical issues in this study:

Term	Definition
Kind of Community (KOC)	Reflects nature or kind of community which refers to distinct style of communities.
Economically Developed Suburb (EDA)	Suburbs with high levels of economic activity, social complexity, relatively high income levels.
Growth Communities (GRC)	Rapidly expanding communities in transition.
Rural Economic Centers (REC)	Historic manufacturing and commercial communities; moderate levels of economic activity.
Residential Suburbs (RES)	Affluent communities with low levels of economic activity.
Resort/Retirement/Artistic (RRA)	Communities with high property values; relatively low income levels and enclaves on retirees, artists, vacationers and academicians.

Term	Definition
Small Rural Communities (SRC)	Small towns; sparsely populated; economically underdeveloped.
Urbanized Centers (URC)	Manufacturing and commercial centers; densely populated; culturally diverse.[13]
Program Prototype	General program category as defined in 502.0.
Program Prototype 502.0	This paragraph contains a list and description of the program prototypes. A child placed in any program shall be eligible, on the same basis as other children, for the auxiliary, supportive and remedial services that are provided as part of the regular education program to which the child may be assigned.
502.1	Regular education program with modifications.
502.2	Regular education program with no more than 25% time out, i.e., 25% time reserved for instruction provided in a resource room.

Term	Definition
502.3	Regular education program with no more than 60% time out, i.e., 60% time reserved for instruction provided in a resource room.
502.4	Substantially separate program.[14]
Least Restrictive Prototype (LRP)	The program that, to the maximum extent appropriate allows a child to be educated with children who aren't in need of special education. For purposes of the program, prototypes that are listed in 502.1 through 502.6, of these regulations, one prototype is less restrictive than another if it appears before the other.
Most Restrictive Prototype (MRP)	This term includes the following prototypes: 502.3 and 502.4.
Handicapped (Hcdp)	"Handicapped", when applied to individuals, means individuals who are mentally retarded, hard of hearing, deaf, speech

Term	Definition
	or language impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, or other health impaired persons with specific learning disabilities. They are individuals who because of their handicapping condition, cannot succeed in the regular vocational education program without special education assistance. These individuals require the development of an Individual Educational Plan (IEP) or an Individualized Work Rehabilitation Plan (IWRP).
Individual Education Plan (IEP)	A written statement (program) for each handicapped child which includes: (a) statement of present levels of educational performance, (b) statement of annual goals, including short term instructional objectives, (c)

Term	Definition
	statement of specific educational services to be provided, (d) statement regarding extent to which child will be able to participate in regular programs, (e) projected date for services, and (f) appropriate objective criteria and evaluation procedures for determining, at least on an annual basis, whether instructional objectives are being met.
Mainstream (Mst)	In a mainstreamed program the handicapped student is placed in a regular class with non-handicapped students. Extra support is provided to the handicapped students or to the instructors in the class. This supplemental support may take the form of the assignment of modifications, or the provision of special remedial education

Term	Definition
	instruction, counseling, or other services to the handicapped students enrolled in regular classes.[15]
Vocational High Schools	These school systems are governed by Chapter 74 regulations which identify ten factors or criteria that a program must satisfy in order to be eligible for state aid: i.e., organizational control, location, equipment, courses of study, qualifications of teachers, methods of instruction, conditions of admission, employment of pupils and expenditures.
Chapter 74	Chapter 74 of Massachusetts General Laws as amended by Chapter 731 of the Acts of 1988 govern state approved and state aided vocational-technical education programs in the following areas: agriculture, allied health, automotive, construction,

Term	Definition
	marketing, service occupations, industrial manufacturing programs and technical programs.[16]
Local Education Agency (LEA)	Public school system within each community or locality.
Learning Disabilities (LD)	(Based on definition provided by the National Advisory Committee on Handicapped Children, U.S. Department of Health, Education, and Welfare, 1968). A learning disability refers to one or more significant deficits in essential learning processes requiring special educational techniques for its remediation. Children with learning disabilities generally demonstrate a discrepancy between expected and actual achievement in one or more areas, such as spoken, read, or written language, mathematics, and spatial orientation. The learning

Term	Definition
	disability referred to is not primarily the result of sensory, motor, intellectual, or emotional handicap, or lack of opportunity to learn. Deficits are to be defined in terms of accepted diagnostic procedures in education and psychology. Essential learning processes are those currently referred to in behavioral science as perception, integration, and expression, either verbal or nonverbal. Special education techniques for remediation require educational planning based on the diagnostic procedures and findings.
Special Needs (SPED)	A collective term used to indicate one or more of the following: women, handicapped, Blacks, Hispanics, other minorities, disadvantaged, individuals with limited English language

Term	Definition
	proficiency, the elderly, the imprisoned, veterans, displaced homemakers (including divorced or separated homemakers seeking employment).
Behavior Disorders (BD)	A general term used to denote any behavior that is not socially acceptable or causes a disruption of the immediate environment.
Educable Mentally Retarded (EMR)	Educable mentally retarded represent a group of individuals whose general intellectual capabilities limit their ability to benefit from the typical classroom structure. This group frequently includes students who are considered culturally disadvantages or educationally handicapped.[17]
Comprehensive High School	An accredited school which has available the necessary resources to achieve its stated purpose through

Term	Definition
	appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will do in the foreseeable future[18].

Scope of the Study

The scope of this study is such that: only data from selected vocational and comprehensive high school systems in Massachusetts has been utilized. The basic questions posed in this study are related to the following general issues:

* The overall intent of this study is designed to ascertain which delivery system (vocational or comprehensive) is more advantageous for special needs students.
* This study will focus on the importance of which of the above two delivery systems can enable special needs students to function in the least restrictive prototype.
* This study will be able to make recommendations pertaining to the needs of both the vocational and comprehensive school systems and maintain a current "End of the Year Report" which specifies by grade and prototype the specific number of special needs students.

Delimitations:

* The ability to generalize data from 65 (out of 118) vocational and 65 (out of approximately 400) comprehensive school systems is a limitation. The size of the sample (65 comprehensive and 65 vocational) school systems is a limitation of this study.
* This study is limited to the manner by which the randomly selected 65 comprehensive and 65 vocational maintained and updated their Chapter 766 data base from 1978 to 1988. A note about the random process is that the Division of Occupational Education has a policy that each school system which has five or more vocational approved courses of study is identified as a vocational school system. Therefore there is a wide disparity among the comprehensive school systems which generally have one to three vocational approved courses of study whereas the vocational school systems have 15 to 20 vocational approved course offerings.
* This study is limited to the state of Massachusetts and should not be generalized to any other state in the nation.
* There were large numbers of school systems, both comprehensive and vocational which do not maintain their data base in grade format. In essence, they maintain their data files in the manner by which the

Department of Education request their October 1st reports, i.e. Grades (9-10), (11-12) or Grades 9-12. Such cumulative sub totals were not and could not be utilized in the computerization of the data.

End Notes

[1] P.L. 98-524, Carl D. Perkins Vocational Educational Act, Washington, D.C., October 19, 1984, 6.

[2] P.L. 94-142, Education for All Handicapped Act, Washington, D.C., November 29, 1975, 9.

[3] Massachusetts Department of Education. Chapter 766 Regulations, Quincy, MA, September 1986, 54.

[4] Correspondence by the Associate Commissioner, Division of Occupational Education, Quincy, MA to the State Wide Task Force members, Dec. 14, 1988, re: "Address the needs and issues of special needs students in vocational technical school systems".

[5] Massachusetts Association of Vocational Technical Administrators of Special Education, State Wide Survey of Special Needs Students in Massachusetts Vocational Schools - October 1, 1988, Quincy, MA.: Dec. 14, 1988.

[6] Miller, Sydney R. and Patrick Schloss, Jr., Career-Vocational Education for Handicapped Youth, (Rockville, MD.: Aspen Systems Corp., 1982), 49-50.

[7] Division of Occupational Education, "Chapter 766 Students in Chapter 74 Programs, School Year 1988-89", Quincy, MA, May 1989.

[8] Sheppard, N. Alan, A Policy Analysis of Professional Development and Personnel Preparations for Serving Special Populations, (Columbus, OH: National Center for Research in Vocational Education, 1984), 3.

[9] Sheppard, 7.

[10] Correspondence by the Massachusetts Vocational Technical Administrators of Special Education to Dr. Mary Beth Fafard, Associate Commissioner, Special Education, Nov. 7, 1988, re: "Several issues related to special needs students attending vocational technical school systems".

[11] Wm. T. Grant Foundation on Work, Family and Citizenship, The Forgotten Half, Pathways to Success for America's Youth and Young Families, Washington, D.C., November 1988, 105-106.

[12] Correspondence by the Associate Commissioner, Division of Occupational Education, Quincy, MA to the State Wide Task Force members, Dec. 14, 1988, re: "Address the Needs and Issues of Special Needs Students in Vocational Technical School Systems".

[13] Massachusetts Department of Education, A New Classification Scheme for Communities in Massachusetts, Quincy, MA, 1986, 3-6.

[14] Department of Education, 1989-1990 State Plan for Vocational Education, Quincy, MA, 1989, 8.

[15] Division of Occupational Education, Vocational Education for the Handicapped, Glossary of Terms, M.R., L.D., and E.D. Terms, Career and Vocational Terms, Module D, Quincy, MA, 1986, 31-35.

[16] Department of Education, 1989-1990 State Plan for Vocational Education, Quincy, MA, 1989, 8.

[17] Miller, Sydney R. and Patrick Schloss, Jr., Career-Vocational Education for Handicapped Youth, Rockville, MD, Aspen Publications Co., 1982, 43.

[18] National Study of School Evaluation, Evaluative Criteria for the Evaluation of Secondary Schools, 5th Edition, Falls Church, VA, Southern Illinois University, Carbondale, IL 1984, 3.

CHAPTER II

REVIEW OF THE LITERATURE

The focus of this chapter will be to examine the factors identified as: designation of handicap, importance of programmatic concerns, significance of concepts, ramification of legal discussion, critical understanding of socioeconomic factors and appreciation of the research literature in learning style, all of which contribute to the success of special needs students in the educational setting. These factors are relevant in the appreciation of the wide variety of forces which can impede or accelerate mainstreaming for special needs students.

In a 1988 study by Walker et al, relative to the issue of who leaves a special education setting and who does not, the following factors appear to be most significant:

* Child's initial primary handicap classification
* Those initially classified as speech impaired were most likely to be terminated (33.1%), followed by those initially classified as learning disabled (14.9%), emotionally behaviorally disturbed (9.1%), or vision impaired (8.6%).
* Children initially classified as hearing impaired, physically/multiple handicapped, or mentally retarded were rarely, if ever, terminated.[19]

The study by Walker et al refers to the importance of diagnosis rather than the designation of a comprehensive or vocational school system as being a critical issue of mainstreaming and fulfilling one's potential. In addition to the paramount importance of classification several programmatic features were discussed which also could explain the movement in and out of the special education system. Walker and associates listed the following concerns:

1. Achievement of the special education goals specified in the child's IEP.
2. Maturation and growth of the child such that the original condition of the child is better (or worse).
3. "Falling off the cliff" because of limited placement options for elementary school graduates.
4. Changes in school districts budgets or policies such as a decrease in funding for Chapter I or a change in program eligibility criteria.
5. Assessment changes, including the use of different criteria by different evaluators and impaired evaluation techniques overall.[20]

Thus Walker documents the wide degree of programmatic factors which could impede or preclude movement within the special education system.

Within the third edition of the 1986 text: Handbook of Research on Teaching, important issues were raised relative

to the significance of terms within the PL94-142 legislation. The concepts implied in "least restriction" and "mainstreaming" have in fact reduced the number of self contained special classes for EMR, LD and BD children in favor of placement in regular grades with needed services provided in the regular class or on short-term pullout to a resource room.[21]

The wide ranging implications of the operational meaning given to these concepts contribute to movement of students within a special education system.

An additional motivating factor which provided opportunities for special needs students to accelerate and improve their lives was the legal decision involving the 1972 landmark case of the Pennsylvania Association for Retarded Children vs. the Commonwealth of Pennsylvania. The Parents Association argued successfully for the special needs students regardless of handicap to be accepted into appropriate educational services, which was interpreted as special educational services. This court case drastically altered the traditional definition of education as not only being associated with one's education, but extended the definition of education to include basic self help skills. In this case therefore the legal system can be referred to as an institution which has in fact accelerated the opportunity for special needs students to achieve their potential.

Research by Jenson & Budoff relates the importance of socioeconomic factors as predictors in movement within the field of special education. Their initial findings confirm the clinical impressions that EMR children from poorer economic backgrounds are often more socially adept and able to learn non-academic tasks than are their equal IQ middle class counterparts.[22]

The observation by Jenson & Budoff reinforces the need to equate intelligence with the colloquial term "street smart" rather than "text book smart". Such intuitive intelligence by those who represent a low economic strata is not appreciated by middle class administrators who are accountable for the organization and delivery of educational and special educational services.

The research data by Jenson & Budoff is substantiated by a 1988 article prepared by Fitzgerald. Fitzgerald's thesis in his article refers to the importance of associating one's learning style with achievement in an educational setting. Fitzgerald states that the two primary designation of learners:

Left Brain - Administrative and Bureaucratic

Right Brain - Achieves success in Artistic and Manipulative careers

often are not appreciated by individuals who direct and administer the educational delivery system.

Specifically Fitzgerald states...We are watching an almost unbelievable cycle of:

* Ignoring learning research
* Mandating one type of curriculum for all students regardless of individual learning styles.
* Decrying the cost of mandates and the disappointment of the resulting increase in dropouts
* Ignoring the destruction of vocational education and other hands-on approaches that help teach <u>academic</u> skills best to many students
* Ignoring the fact that only about 50% of the students who enter college then earn a degree
* stimulating superficial media stories about failure of public schools when much of failure is being generated by a lack of critical analysis among reform leaders

Fitzgerald concludes that left brain learners (Administrator) are promoting policies that mandate their style of learning (increased academic graduation requirements) in the guise of reform because the path advocated often proved successful for them. Whereas they do not recognize that a different path is appropriate for others. Because of this Left Brain momentum - we are driving some youngsters with high creative and artistic potential away from education and causing them to drop out and inhibit them from achieving marketable skills for either work or admission and success in a higher education setting.[23]

In terms of the 1989 National Assessment of Vocational Educational Report, the data with reference to special needs students is stated as follows:

* For students with handicaps, the vocational education they take is also likely to be mainstreamed 81.7% of credits, that is the credits one earned in regular as opposed to self-contained classrooms.
* In contrast only 59.6% of the academic credits of handicapped students are earned in regular classrooms.[24]

The foregoing statistics point to or support the singular ability of the vocational delivery system to accommodate and respond to the vocational needs of special needs students in a mainstream context.

Relative to the issue of gender identity, this report cites that high-quality vocational education is more elusive for female handicapped students and academically disadvantaged students. Approximately half of the vocational credits earned by handicapped and disadvantaged females are in low-level service occupations or consumer and homemaking education.

This report cited additional factors which are related to the importance of socioeconomic factors for special needs students:

* Schools with the highest poverty rates and lowest academic achievement are 40 percent less likely to

offer their students access to an area vocational facility than schools with the lowest poverty rates.

* Schools with the largest percentage of disadvantaged students offer 40 percent fewer vocational courses, a third as many occupational programs, and half as many advanced courses as schools with the smallest percentage of disadvantaged students.
* Students in schools with the highest rates of poverty and lowest achievement average 6.03 credits of vocational education and 12.06 credits of academic subjects, compared with an average of 3.26 credits of vocational education and 16.26 credits of academic subjects in the most advantaged schools.[25]

The socioeconomic data cited in the 1989 National Assessment of Vocational Education Report refers to the overwhelming need of targeting increased federal vocational education resources to school systems which possess large numbers of poor and low achieving students.

The data underscores the critical dimension and suggests the long term affect of students' poverty within a school district as a factor which impedes or accelerates mainstreaming for special needs students.

The Massachusetts Division of Occupational Education in its 1988 Program Performance Report, noted:

* In Fiscal Year 1988 only 5% of the 293 projects for handicapped students produced service in a substantially separate setting.

* Most projects for handicapped students provided the additional support or adaptation in curriculum instruction, equipment and facilities needed to enable these handicapped students to succeed in regular vocational skills training programs.[26]

The Massachusetts Division of Occupational Education data sheds light on the ability of the vocational delivery system to be responsive to the wide degree of handicapped students who represented the 293 projects funded in 1988.

The U.S. Department of Education recently released a comprehensive analysis of Handicapped and Disadvantaged Students: Access to Quality Vocational Education and the pertinent data relative to the research question discussed in this dissertation are as follows:

* This study was based on a 1989 High School Transcript Study (HSTS) which provided researchers the first opportunity to investigate the course - taking behavior of handicapped high schools students on a national level and to compare their educational course taking experiences with those of their handicapped classmates.[27]

As a result of such an assessment the High School Transcript Study revealed that most of the vocational credits earned by handicapped students are in regular, as opposed to self contained, vocational classrooms.[28] This finding is encouraging given the absence of the Perkins Act and other federal legislation that handicapped students

should be provided with access to vocational education in the "least restrictive environment."

The point by The National Assessment Report relative to the number of credits being earned by handicapped students in regular vocational education coincided with the 1988 Massachusetts data on the 293 projects which served the handicapped; the overall consensus of these two reports is that the handicapped population can and did achieve well in a regular vocational educational environment. The term 'regular' implies the following prototypes: 502.1; 502.2; 502.3. These are the prototypes which special needs students receive services in the mainstream setting. Namely, 502.1 (Minor Modification of Curriculum), 502.2 (25% Resource Room instruction-75% mainstreamed), and 502.3 (60% Resource Room instruction-40% mainstreamed). These least restrictive prototype designations, and the issue of 'regular' vocational education for handicapped students is a significant and important point in this particular dissertation.

The National Assessment Report further found that studies of employment experiences of handicapped students show that well supervised employment experiences during high school as those provided by cooperative education, are important determinants of successful labor force entry and job retention.[29] This finding supports the long held assumption that given a well supervised cooperative education program, handicapped students can in fact enter

the market place. The quality of their vocational programming "does make a difference".

The National Report provided a finding relative to the quality of vocational programming for the female handicapped population and disadvantaged female student population. Their data suggest that problems experienced by female students in gaining access to high-quality vocational programs are exacerbated for handicapped and disadvantaged students. That is, gender in combination with special needs, has more deleterious effects on students' access than either handicapping condition or academic disadvantagement alone.[30] This latter point refers to a limitation of this study, i.e. the ability of the handicapped population to succeed through the path of "least restrictive prototypes" should also take into account the gender of the handicapped population.

This National Report cited the importance of data generated by the National Longitudinal Study of Handicapped Youth by the Office of Special Education Programs. Specifically, this data reports that handicapped students enrolled in vocational education in a high school had a significantly higher likelihood of gaining employment after leaving school than did students who did not take vocational courses.[31] These particular data supports the value of vocational education programming for the handicapped population.

The implications of the National Assessment data are as follows:

* Handicapped students attending regular high schools have access to vocational education.
* Most of the credits they earn in vocational education are in regular classes and overall they spend a greater share of their time and earn more credits in vocational education than other students do.
* A larger proportion of the courses in which handicapped students enroll are taught at the area vocational schools, where many of the occupationally specific programs available to high school students are offered.
* Most handicapped students have access to the same types of vocational programs (general and specific labor market preparation, work based courses) and the same broad vocational areas; agriculture, trades and industry, as other students. The main exception to this finding is their low enrollment in business and office occupations.[32]

The National Assessment study concluded that while the intent of Congress that handicapped students have access to vocational education at the secondary level is being implemented nationally, the mandate of Congress to encourage specific enrollment in vocational fields has not been

achieved. Nor has the objective to ensure equal access to all persons regardless of race/ethnicity been accomplished.

The conclusions cited by the National Assessment Study cite the degree of access for the handicapped population as a positive achievement, however the issue of enrollment in vocational fields as well as of access options for female handicapped and female disadvantaged populations remains an elusive goal.

This National Report concluded that fundamental to the nation's special education system is the adage that each student has a constitutional right to a "free appropriate public education" which ought to be provided in the "least restrictive environment" and that such practice shall take into account the individual student's needs.[33] This report observed that the variability in the amounts and types of vocational resources in which handicapped students are earning credits may well reflect a sensitivity on the part of special and vocational education to individual students' needs that can be taken as a positive development in high school education.[34]

Within the mandate of the National Center for Research in Vocational Education is the provision that requires the identification of exemplary programs and effective practices for serving youth and adults with special needs through vocational educational programs. This task is now being undertaken on a national scale by the Technical Assistance for Special Populations Program (TSAPP) of the National

Center for Research in Vocational Education, University of Illinois site. Over 500 surveys were distributed on a national level and 366 were completed and returned. Tables 4 and 5 indicated respectively the positions of Survey Respondents and Employment Settings of Survey Respondents.

TABLE 4

POSITIONS OF SURVEY RESPONDENTS [35]	
Vocational Teachers	96
Vocational Special Needs Teachers	79
Other	62
Local Administrators	56
Special Education Teachers	28
University Education Teachers	23
State Administrators	22

TABLE 5

EMPLOYMENT SETTING OF SURVEY RESPONDENTS [36]	
Secondary	245
Post Secondary	55
University	34
State Agency	23
Adult Education	6
Other	2

The personnel cited in Table 5 and employment of such eventually resulted in the identification of components of effective vocational education programs for special needs youth and adults. This specific data is noted in Table 6.

TABLE 6

COMPONENTS OF EFFECTIVE VOCATIONAL EDUCATION PROGRAMS FOR SPECIAL NEEDS YOUTH AND ADULTS [37]

Program Administration

1. Strong Administrative Leadership and Support
2. Sufficient Financial Support
3. Formative Program Evaluation
4. Summative Program Evaluation

Curriculum and Instruction

5. Individualized Instruction
6. Integration of Academic and Vocational Curricula
7. Appropriate Instructional Settings
8. Cooperative Learning Experiences Comprehensive Support Services
9. Assessment of Individual's Vocational Interests and Abilities
10. Instructional Support Services (Aides, Resources)
11. On-going Career Guidance and Counseling

Formalized Articulation and Communication

12. Parental Involvement and Support
13. Notification of Both Students and Parents Regarding Vocational Opportunities
14. Vocational Educators Involvement in Individualized Education Planning
15. Formalized Transition Planning
16. Intra and Interagency Collaboration

Occupational Experience

17. Work Experience Opportunities
18. Job Placement Services
19. Follow-up of Graduates and Non-graduates

The "Components of Effective Vocational Educational Programs" identifies the characteristics which are being utilized to describe exemplary vocational education programs for special needs youth. It is important to underscore that the largest group of respondents to this national survey was the vocational education educator and secondly, the secondary instructor within a comprehensive high school. This information is pertinent to the underlying issue of which vocational education program characteristics or components can in fact enable special needs students to accelerate their learning in a vocational setting.

Eagle et al, in their text entitled: Increasing Vocational Options for Students with Learning Handicaps: A Practical Guide provides useful and valuable suggestions as to how to best provide vocational education services for students with special needs.

The specific audiences which the text addresses are[38]:

* Vocational Education Teachers
* Vocational Education Administrators
* Special Education Teachers
* Professional Support Staff
* Principals and District Administrators

The specific guides are representative of the following topics[39]:

* Successful vocational programs for mildly handicapped youth, etc.

The information provided in this guide is that there are valuable points which the different disciplines can implement that would accelerate the vocational potential of special needs youth.

In reference to the role of vocational education teachers, the guide suggests the value of the following points[40]:

* Give students individual attention and encouragement
* Maintain high standards but be very patient
* Teach employability skills
* Match instructional materials to student abilities
* Use hands-on training
* Alternate difficult tasks with easier ones
* Break down assignments into smaller parts
* Introduce students to occupations that match their skill level
* Teach academic and social skills needed for this occupation
* Ask for a teacher's aide
* Recruit advanced students as tutors
* Consult with Special Education about individual students
* Notify Resource teachers of student assignments
* Ask Special Education to help modify teaching materials and curriculum
* Work with Special Education to develop parental understanding

* Provide staff development opportunities

The 16 points stated by Eagle et al represent excellent practices for vocational educators in reference to their task of teaching special needs youth. Such a list is critical in regards to the matter of achieving the goal of least restrictive setting in a vocational environment.

A study relevant to the participation of special education students in vocational educational programming in high school was completed by Philip Kaufman, M.P.R. Associates, Inc. This particular report noted that approximately eighty percent of all vocational coursework taken by handicapped students was in mainstream classrooms, with more than three out of four handicapped students taking more than fifty percent of their vocational coursework in mainstream settings.[41]

The statement by Kaufman refers to the importance of success which the special needs students experienced in mainstreamed settings. Namely, in schools with enrollments that were greater than two thousand, mentally retarded students earned only about thirty-seven percent of their vocational credits in mainstream courses. However, in schools with enrollment of less than one thousand students, mentally retarded students earned seventy percent of their vocational credits in mainstream courses. Similarly, seriously emotionally disturbed students in relatively small schools earned about eighty percent of their vocational coursework in mainstream settings, compared to less than

fifty percent for seriously emotionally disturbed students in large schools.[42] It appears that the size of the school system has a significant bearing on the number and type of vocational course offerings. In smaller schools mainstream education is encouraged, and in a large school system where expanded versions of course offerings are available mainstream education declines because special classes are available and encouraged for special needs students.

In terms of the importance of school climate, this study also stated ...The climate of small schools fosters a sense of community that, in turn, carries over to their treatment of handicapped students. In other words, they believe that handicapped students in schools with this sense of community are more likely to be looked upon by the counselors, teachers and other students as "one of us" rather that as outsiders. As a result, the integration of these handicapped students into vocational coursework may be facilitated by the community atmosphere of "undermanned" small schools. In the words of one researcher, "small schools emphasize.who one is rather than what one is."[43]

The point about school climate is especially significant in terms of viewing the size of the school systems which participated in this dissertation and observing the degree of mainstream vocational education programming for special needs students.

In the large school systems, the administration may be in a constant dilemma. Handicapped and disadvantaged

students are competing for the same fiscal resources. In actual dollars however, mainstream vocational classrooms should cost less, not more, than self contained vocational classrooms for handicapped students. However, in staff time and commitment, it might "cost" more to build effective mainstream vocational courses. Kaufman's study noted that in the exceptional programs for special needs students that they visited, a counselor or special educator was responsible for discussing handicapped students with teachers and did so diligently. This practice was found to be the key to increasing effective mainstreaming because it provided teachers with the informational support necessary to adapt their teaching styles and curriculum.[44] The importance of a dialogue reflects the overall issue of how critical it is for many disciplines to work as a team in providing for and complimenting the many details associated with a mainstream vocational educational program for special needs students.

A recent study sponsored by the Massachusetts State Advisory Council on Vocational Technical Education, in terms of special education placement at vocational technical school systems, noted the following comments by a vocational-technical counselor who was concerned about the increasing number of special needs students in vocational school systems: There is a disproportionate number of special education students on vocational technical educational school systems. The irony is that this is where

these students belong. But, he continues, the net effect is that as numbers increase, a balance point is reached and passed. Vocational-technical schools begin to have more students and staff associated with special education and it becomes a self-fulfilling prophecy.[45]

The latter point reflects the growing frustration among the vocational counselors who work with the special education and regular student clientele within public school systems.

The study by the National Assessment of Vocational Education, on handicapped and disadvantaged students substantiated that special needs students do have access to quality vocational educational programming, and as a consequence earn more credits than the non-handicapped population in vocational education. The studies indicated by the National Center for Research in Vocational Education confirm the above statement and provide further conclusive evidence that special needs students can decidedly profit from vocational education skill training. The question posed in the literature review is, "are the special needs students becoming the majority populations in such school systems and as a consequence is the original mission of vocational education being changed to accept only those students who reflect special needs?"[46]

The research literature finds agreement on the following points:

* There are specific factors which enable special needs students to leave the special needs system.
* The importance of the legal system in enabling more special needs students to have access to the educational establishment.
* The issue of learning style is critical if one is to provide more opportunities for special needs students to excel in a vocational and/or comprehensive setting.
* There is an abundance of national data to support the thesis that special needs students experience more success in vocational courses which reflect a mainstreamed setting.
* The national data is corroborated by the recent Massachusetts Division of Occupational Education information cited in its 1988 Program Performance Report.
* There are a number of identifiable characteristics which represent common features of successful vocational/special needs programs.
* The issue of school size and its corresponding climate directly affect the ability of special needs students to experience success in a vocational setting.

These factors represent the wide degree of research literature cited in the vocational/special needs area.

Additional studies which addressed the importance of the least restrictive issue refer strongly to the need for additional research in this matter. These studies are as follows:

* State Plan for Vocational-Technical Education in Massachusetts for Fiscal Years 1992-1994
* The State Auditor's Report on Special Education in Massachusetts
* Harrington Report to the Governor and Lt. Governor on Public Education

In reference to the recently developed Massachusetts State Plan: "Handicapped student enrollments are proportionally higher in occupational programs than in all district programs (19% vs. 18%), although proportionally less handicapped students enroll in Chapter 74 programs (24% vs. 18%)."[47]

This statement augments the previous data that special needs students appear to be enrolled in more vocational programs than their counterparts in comprehensive schools.

The Massachusetts State Plan further states: "Schools offering Chapter 74 programs with more than 30% students who require an individual education plan need to examine the appropriateness of policies with their secondary schools." Furthermore the plan states that "comprehensive high schools need to enroll a higher percentage of handicapped students in their occupational education programs."[48]

Another critical study which was recently released by the Massachusetts State Auditor's Office noted the high number of special needs students (with appropriate support systems) who could achieve a mainstream status. The respondents were superintendents and special education administrators and their responses were as follows: "The needs of about 77.5% of 502.1 pupils, about 41.5% of 502.2 students and 28% of 502.3 pupils could be appropriately served in regular education." Respondents also suggested that about 30% of pupils in the 502.4, 502.5 and 502.6 placement categories could be served in less restrictive placements, closer to the mainstreamed environment.[49]

The issue of least restrictive setting has also recently surfaced in the Harrington Report as being controversial and worthy of discussion and study. The report was recently submitted to Governor Weld and it states in part, ...The Massachusetts Business Alliance on Education endorses the recommendations of the Governor's Task Force on Special Education 11/89, especially the provision calling for the modification of the "maximum feasible benefit" regulation.[50] This regulation would lessen the impact of the least restrictive setting as the primary goal of special needs students.

The Harrington Report continues to highlight the need for examination of the special education issue as vital and timely. Harrington states ...that the 1989 Governor's Task Force on Special Education should be a top priority. Our

percentage of total enrollment in special education as well as our average cost per pupil are well above the national average.[51] Clearly the special education field has attracted wide and critical notice from the executive branch of the Massachusetts state government.

End Notes

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CHAPTER III

METHODOLOGY

The general overview of the methodological procedures utilized in the study refer to a survey of 65 randomly selected comprehensive school systems and 65 vocational school systems. The computer language BASIC was used to generate the list of the 65 comprehensive and 65 vocational school systems. For a more detailed description of this approach please refer to Appendix C.

The selection process of the 65 vocational schools was conducted in the following manner: The criteria of a vocational school in the Commonwealth of Massachusetts is that the school has to have five or more vocational offerings for it to be identified as a vocational school. The Directory of Chapter 74 Vocational Approval Programs of Massachusetts lists 65 vocational school systems which satisfied this criteria. The process used to define this study group is commonly referred to as a "sample of the whole" or as the "totally defined population." In Moore's text, Evaluating Educational Research, the author states in part..."a population is defined as a complete set of individuals or objects having some common observable characteristics."[52] Therefore in reference to this study all 65 vocational school systems which were noted in the Directory of Chapter 74 Vocational Approval Programs of

Massachusetts had the common observable characteristics of five or more approved vocational programs.

The listing of these school systems is noted in Appendix D.

The letter of introduction and survey, which was mailed to the 65 comprehensive and 65 vocational school systems (Appendix E), elicited information pertaining to the number of special needs students in each prototype (502.1 - 502.4) from 1978 - 1988. Each school system was asked to identify such students by grade 9 - 12. The letter to the superintendents asked that the administrators of special education be responsible for completing the survey. In this manner each school system was properly informed of the research procedure and the instrument to be used. The data was subsequently verified by the administrator who was legally responsible for maintaining the special education system.

The nature of questions on the survey referred to the number of special needs students who are identified as being placed in Chapter 74 Vocational Approved course offerings. Chapter 74 is the Massachusetts statue which governs the description of a qualified course and the offerings which are eligible for reimbursement by the Commonwealth of Massachusetts. The prototype numbers referred to each prototype from grades 9 - 12 noted from October 1978 to October 1988. In addition to the data requested, the format of the instrument represented one grade for each page.

Therefore, grade 9 had a separate sheet, and the sophomore through senior years, grades 10 - 12, also were noted on successive separate sheets. This format was developed to enable the special education administrator to view the survey form with simplicity and ease. In addition to the survey, the study also utilized an on-site validation instrument. The rationale for such on-site visitations is noted in Appendix F and the instrument is shown in Appendix G.

Validation was to be accomplished by visiting the six school systems and asking the special education administrator to personally review his/her files and note ten special needs students in each grade (9 - 12) from a particular year (i.e. 1985 - 1988) and record their placement for the four years in question. This exercise provided the study with additional validity and also enabled the data to be documented with care. The on-site data of the six school systems is noted in Appendix H. The identities of these six school systems are as follows:

Three Comprehensive School Systems

Quincy Public Schools, Quincy, MA

Saugus Public Schools, Saugus, MA

Milton Public Schools, Milton, MA

Three Vocational School Systems

Blue Hills Regional Vocational High, Canton MA

South Shore Regional Vocational High, Hanover MA

Minuteman Regional Vocational High, Lexington MA

The process of selecting the three vocational and comprehensive school systems was in reference to the researcher's October 27, 1988 Memorandum to the Associate Commissioner of Special Education and Occupational Education. Specifically, the memorandum states in part...on-site observations would be undertaken with those school systems which reported significant discrepancies from one year to the next.[53] (See Appendix F.)

The six school systems chosen were those schools which represented marked tendencies for discrepancies of special needs students moving from one prototype to another (i.e. 502.4 to 502.2 or 502.3 to 502.1). It was determined by the researcher that on site visitations to these school systems would help to clarify the dynamics of such movement.

Research Question

The following statements refer to the research question posed in this dissertation. The rational in this thesis is that over a four year period of time, special needs students who are in attendance in vocational school systems will achieve placements in less restrictive prototypes. Such movements within prototypes represent the combined opinion of the academia/special/vocational team members that the special needs students have maintained progress and could achieve their potential in least restrictive prototypes.

Instrumentation

The general survey instrument was designed to gather data from the 65 comprehensive school systems and the 65 vocational school systems. The on-site data instrument was designed to gather data from the special education administrators in the three comprehensive and three vocational school systems. The on-site form, which reflects a comprehensive examination of all the data provided by the three comprehensive and three vocational school systems, is located in Appendix H.

The information gathered by the general survey instrument indicated the placement of the special needs students in each prototype, grade 9 - 12, from 1978 - 1988. These data would reflect movement from grade 9 - 12 and would illustrate the special needs students being placed in less restrictive prototypes.

In the on-site instrument, these data reflected specific assignments such as: transferred to a private residential school system, dropped out, expelled, repeated year, graduated. These data were more definitive because the on-site school systems, which were accessed could, and did, have more time to specify a special needs students' assignments. The on-site instrumentation would reflect more characteristics and specific reasons as to the documentation of movement within the prototype system. This specificity

is crucial in defining the path and progress of special needs students' success in less restrictive prototypes.

Selection of Subjects

The subjects used in the survey were students who were identified by the special education administrators. These data were compiled for the "End of the Year Report" required by the State Department of Education. The information was documented by the special education administrator referring to the October (End of Year) Report submitted to the Department of Education.

The on-site data was gathered by the special education administrator, 40 cases over a four year period of time (i.e. 1985 - 1988). These subjects were identified by name by the special education administrator, but such names were not included with the actual data.

The issue of the subjects' confidentiality was observed in both the survey and the on-site data gathering.

Description of Statistical Measures

The research question cited in this study is whether special needs students who are located in vocational school systems do in fact excel faster within their prototypes than do their counterparts in comprehensive high schools. It is critical to ascertain whether the students were able to be

mainstreamed throughout their secondary age years in a more advantageous fashion in a comprehensive or vocational school system over a four year period of time.

The specific procedures which were utilized to respond to the research question of this study was conducted in the following manner:

* Frequencies and percentages of the sum total of special needs students, by prototype, reported by the 13 comprehensive and 19 vocational school systems which responded to the survey for the time period: 1978 - 1988.
* Frequencies and percentages of the combined groupings of prototypes: 502.1 + 502.2 and 502.3 + 502.4 of special needs students from the 13 comprehensive and 19 vocational school systems which responded to the survey for the time period: 1978 - 1988.

The statistical procedures utilized in the above two is known as "Statistical Package for Social Sciences."[54]

* Frequencies and percentages were computed from the data gathered by the on-site visitations to the three comprehensive and three vocational high school systems for the purpose of verifying how many special needs students were included in the following categories:

  Stayed in prototype over a four year period of time (i.e. grade 9 - 12)

Dropped out (i.e. returned to feeder school or referred to a private special education school)

Mainstreamed within the regular student population

Changed to a less restrictive prototype (i.e. 502.1, 502.2)

Changed to a more restrictive prototype (i.e. 502.3, 502.4)

End Notes

[52] Moore, Gary W., Developing and Evaluating Educational Research, Little Brown and Company, Boston, MA, 1983, 110.

[53] Memorandum from Sumner Rotman to Dr. Mary Beth Fafard and Dr. David Cronin, regarding "Additional Activity Related to My Doctoral Proposal", October 27, 1988.

[54] Marija, Norusis J., User's Guide: Statistical Package for Social Sciences, McGraw Hill & Co., New York, 1985.

CHAPTER IV

FINDINGS OF THE RESEARCH

Introduction

The data presented in this chapter discusses the results of the survey which was mailed to the 65 comprehensive and 65 vocational school systems. The school systems which responded to the survey are noted in Appendix I. In addition to the general survey of the school systems, the researcher administered an on-site information instrument to three comprehensive and three vocational school systems. The six school systems were chosen in accordance with the intent stated in Appendix F, namely, these six local education agencies reflected in their data marked tendencies or dramatic shifts of special needs students from a most restrictive prototype to a least restrictive setting or from a least restrictive setting to a more restrictive prototype. The identities and the data noted by these particular school systems is noted in Appendix J.

A review of the data from the survey which was mailed to the comprehensive and vocational school systems revealed the following:

Number of responses:

Comprehensive 13 (20%)

Vocational 19 (29%)

The limited data received by the researcher was because the federal government liberalized their reporting systems over the 11 years (1978 - 1988) and the local school systems in their submission of the October 1st "End of Year" report did not have to list special needs students by each grade. The reporting system accepted the following breakout:

Grade 9-12

Grade 9 and 10

Grade 11 and 12

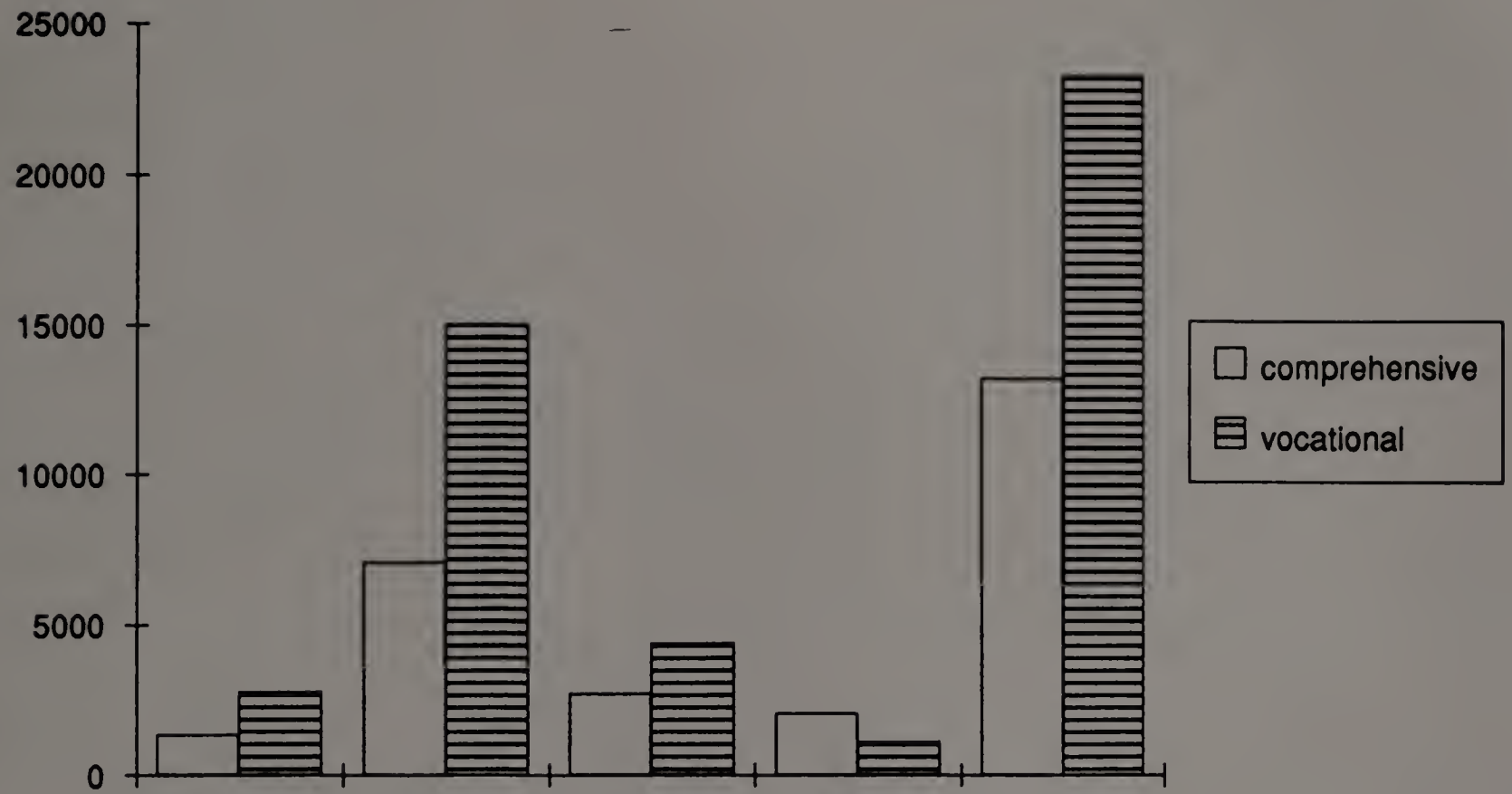
Of the comprehensive and vocational school systems which responded, the data is presented in the following manner:

sum totals of prototypes

502.1 + 502.2 and 502.3 + 502.4

The rationale developed for the grouping of the prototypes was that the first two prototypes, 502.1 and 502.2, are the least restrictive which represent the ability of special needs students to function in less restrictive settings. The latter two prototypes, 502.3 and 502.4, constitute the most restrictive meaning that special needs students require substantially more assistance to function in a public school environment. The researcher grouped the above prototypes in these two categories because it was easier and more practical to interpret the data in question. In addition to the sum totals the data documents the frequencies for these specific groupings.

TABLE 7
SUM TOTAL OF SPECIAL NEEDS STUDENTS BY PROTOTYPE
REPORTED IN BOTH THE
COMPREHENSIVE AND VOCATIONAL SCHOOL SYSTEMS

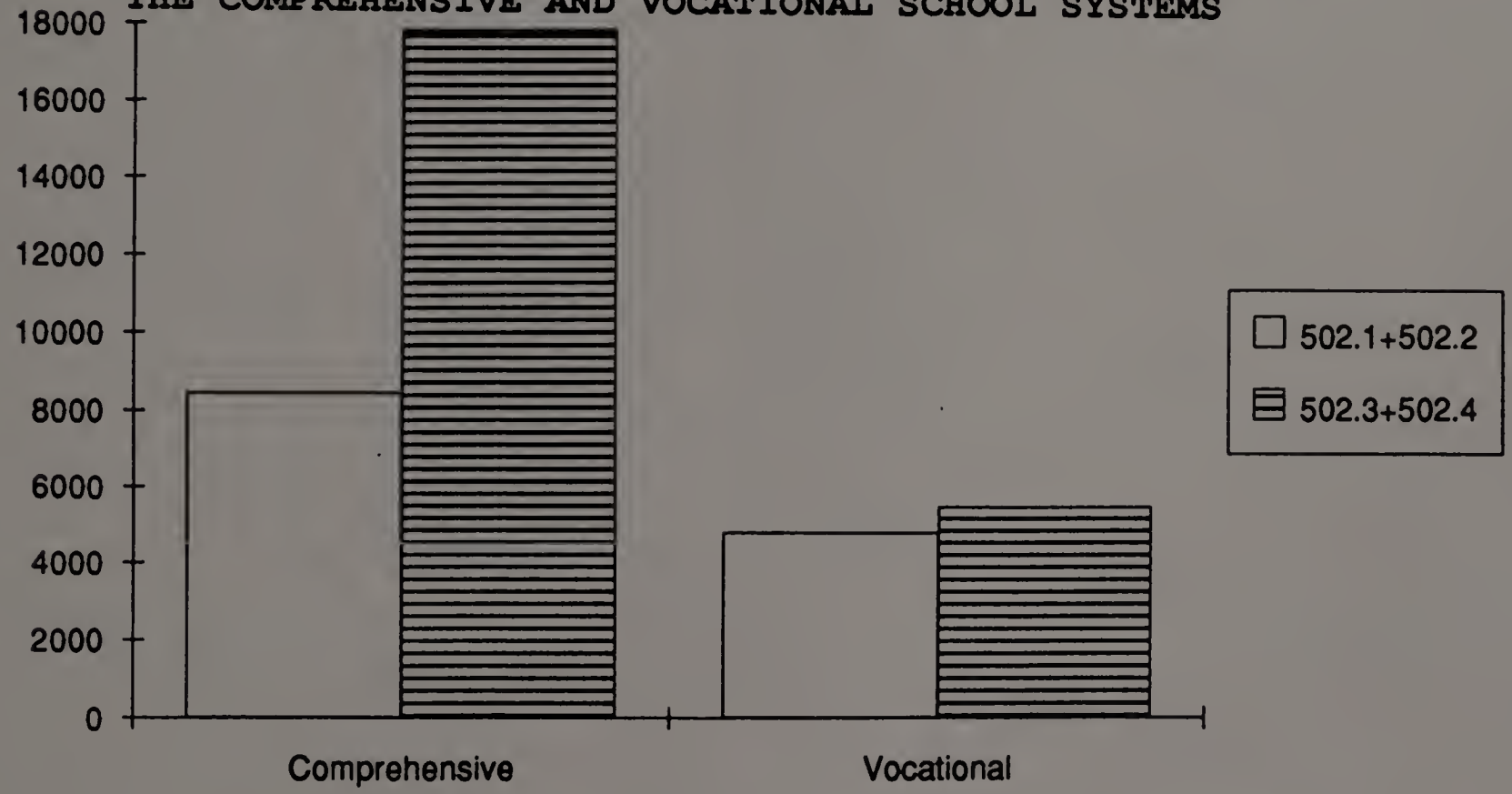


Prototype	Comprehensive	Vocational
N 502.1	1,344 (10.2%)	2,776 (11.9%)
N 502.2	7,079 (53.5%)	15,029 (64.5%)
N 502.3	2,727 (20.6%)	4,389 (18.8%)
N 502.4	2,071 (15.7%)	1,099 (4.8%)
Total	13,221 (100%)	23,293 (100%)

Table 7 shows the total number of special needs students by prototype which were reported by the 13 comprehensive and 19 vocational school systems which responded to the study. In addition to the frequencies of

the data, percentages are cited to reflect the wide disparity among the four distinct prototypes. The data in the table shows that within the vocational school systems there were almost double the number of special needs students in prototype 502.2 as compared to the comprehensive school system and a sharp decline in such students in prototype 502.4. Prototypes 502.1 and 502.3 show a close similarity between the comprehensive and vocational sectors.

TABLE 8
COMBINED GROUPINGS OF PROTOTYPES:
502.1+502.2 and 502.3+502.4
OF SPECIAL NEEDS STUDENTS WITHIN
THE COMPREHENSIVE AND VOCATIONAL SCHOOL SYSTEMS



Prototypes	Comprehensive	Vocational
N 502.1 + 502.2	8,423 (63.7%)	17,805 (76.4%)
N 502.3 + 502.4	4,798 (36.3%)	5,488 (23.6%)
Total	13,221 (100%)	23,293 (100%)

The data found in Table 8 represents a comparison of the special needs students which were reported by the comprehensive and vocational school systems which responded to the survey. Of particular interest is that the data shows in the vocational sector there is a 12.7% difference of special needs students in less restrictive prototypes 502.1 and 502.2 in comparison to the comprehensive sector. In the more restrictive prototypes, 502.3 and 502.4, there is a similar 12.7% difference of such students in the comprehensive sector.

In terms of the special needs students who were documented to be in the more restrictive prototypes 502.3 and 502.4, it appears that there are a larger number of students, 5,488 - vocational and 4,788 - comprehensive, for these school systems which responded to the survey.

Discussion of the On-Site Information Which Complemented the Data Reported by the Survey of the Comprehensive and Vocational School Systems

During the spring of 1988, the researcher conducted six on-site visits to analyze data of identified special needs students from three comprehensive and three vocational high schools. The student identification was made by the directors of special education from each of the six school systems. This task was undertaken to obtain a clearer picture as to whether special needs students move to least restrictive prototypes in vocational school systems faster

than their counterparts who are located in comprehensive school systems. In addition, the researcher hoped to gain a more accurate appraisal of this issue because he would be able to examine specific cumulative files for the special needs students in each of the three comprehensive and the three vocational school systems.

The directors of special education from the six school systems were asked to provide ten actual cases of special needs students from prototypes 502.1 - 502.4 during a particular cohort of four years (i.e. 1978 - 1981, 1985 - 1988). There would be a total of 120 special needs students from the three comprehensive high schools and 120 special needs students from the three vocational high schools. Therefore, for each school system there were 10 special needs students per prototype, i.e., 502.1 (10), 502.2 (10), 502.3 (10), 502.4 (10) = 40 students X 3 school systems = 120 cases.

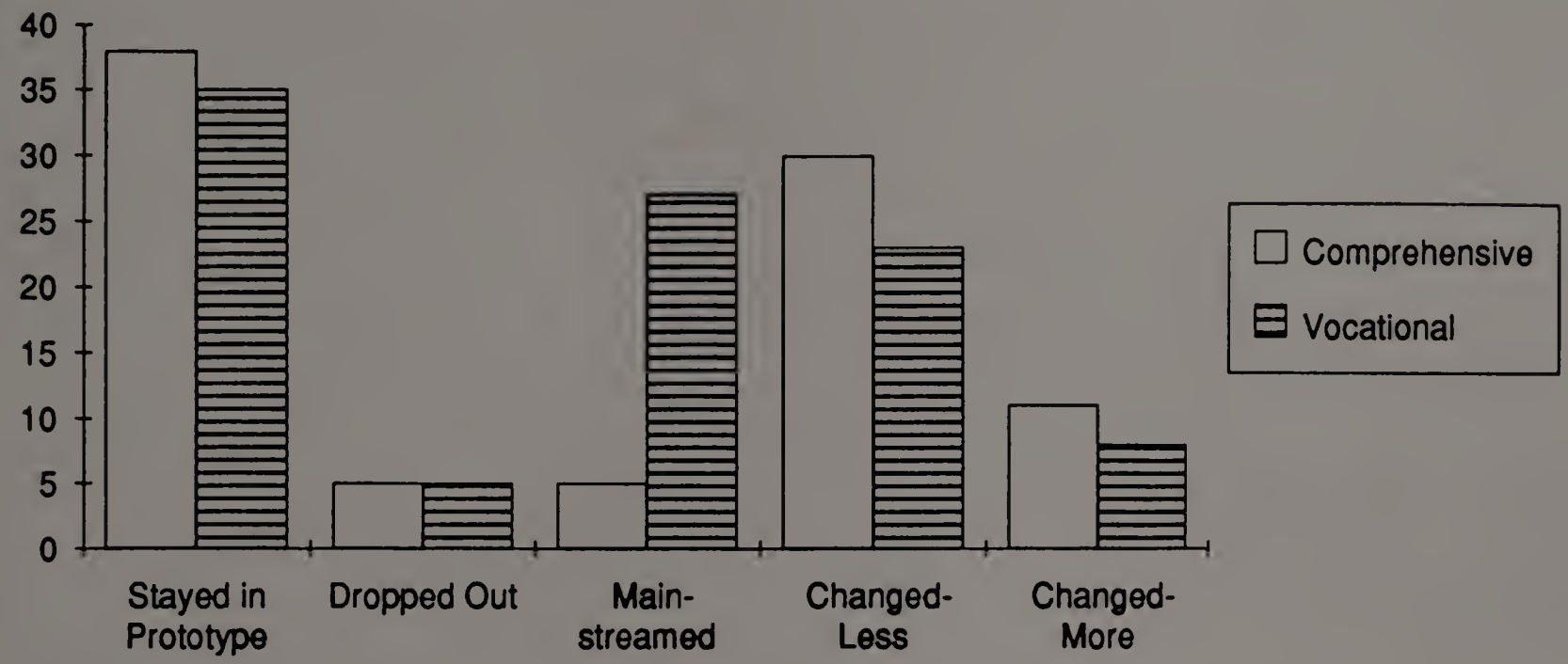
A summary of the data provided by the three comprehensive and vocational high schools is presented in Table 9.

There were five general response categories designated on the on-site form:

* remained in the same prototype - four years
* dropped out (i.e. referred to feeder schools, residential placement and/or a collaborative program)
* mainstreamed

* changed prototype during the four years from a less restrictive to a more restrictive prototype.
* changed prototype during the four years from a more restrictive to a less restrictive prototype.

TABLE 9
SUMMARY OF DATA GATHERED BY THE ON-SITE VISIT TO THE THREE COMPREHENSIVE AND VOCATIONAL SCHOOL SYSTEMS FOR THE FIVE CATEGORIES: STAYED IN PROTOTYPE, DROPPED OUT, MAINSTREAMED, CHANGED PROTOTYPE (LESS, MORE)



	Comprehensive	Vocational
Stayed in Prototype	38 (42.7%)	35 (35.7%)
Dropped Out	5 (5.6%)	5 (5.1%)
Mainstreamed	5 (5.6%)	27 (27.6%)
Changed-Less Restrictive	30 (33.7%)	23 (23.5%)
Changed-More Restrictive	11 (12.4%)	8 (8.1%)
Total	89 (100%)	98 (100%)

The researcher observed the number of files which were complete, i.e., 89 comprehensive and 98 vocational schools.

The files were given to the researcher by the directors of special education and in the comprehensive school systems only 89 (74%) had complete data. Within the vocational schools there were 98 (81%) files which were complete. That is, a file had to have a complete record of a student's movement from one prototype to the next (if applicable) within a four year cohort (1978 - 1988). This record of data is substantiated by the low record of responses documented in the survey which was mailed to the comprehensive and vocational school systems.

The data shown in Table 9 reveals that within the comprehensive sector 42.7% of the students remained in their prototype over a four year period of time; 6% dropped out and similarly 6% were mainstreamed while 34% changed their prototype to a less restrictive designation and 12% to a more restrictive designation. Within the vocational systems, 35% remained in their prototype, 5% dropped out, 28% were mainstreamed, 24% changed to a less restrictive prototype and 8% changed to a more restrictive prototype.

A review of the data presented in Table 9 reveals the following conclusions:

* Nearly 43% of the comprehensive students remained in their respective prototypes during the four years and approximately 35% of the vocational students remained in their given prototype.

* 6% of the comprehensive or special needs students dropped out and 5% of the vocational students dropped out of the special needs systems.
* Within the comprehensive sector 6% of the students were mainstreamed and 30% of the special needs students achieved this status in the vocational sector.
* Within the comprehensive sector approximately 34% of special needs students changed their prototype to a less restrictive setting and in the vocational system 24% of these students changed their prototype to a less restrictive setting.
* Within the category of changing to a more restrictive prototype, 12% of the comprehensive students and 8% of the vocational students were documented in this manner.

The significant conclusions from the on-site visitations were three fold:

* 28% of the vocational students achieved a mainstreamed status.
* 34% of the comprehensive students changed their prototype to a less restrictive status.
* 43% of the comprehensive students remained in their prototype over a four year period of time whereas 36% of the special needs students in the vocational sector remained in their prototype during a similar time frame.

These conclusions strongly suggests that the valid diagnostic procedures are in place within both delivery systems and the students have achieved a definite degree of stability within their four year period of education from grades 9 to 12.

The above figures are correlated with the low numbers which represent the "dropped out" figure, i.e., comprehensive 6% and vocational 5%.

In accordance with the data displayed in Table 9, 28% of the special needs students within the vocational sector were able to be mainstreamed, whereas only 6% of such students in the comprehensive arena achieved this status.

In terms of the issue pertaining to "changed to a less restrictive prototype", there were 34% of the special needs students from the comprehensive schools which achieved this goal, whereas there were only 24% of such students from the vocational sector which achieved this status.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Purpose and Rational for this Study

The primary research question posed in this dissertation is whether special needs students are placed in less restrictive prototypes quicker over a four year period of time in a comprehensive as opposed to a vocational delivery system. The response generated by the researcher to the research question is that the comprehensive sector provides more stability for special needs students and the vocational system enables special needs students to access less restrictive prototypes over a four year period of time. The researcher selected this issue because since the advent of the 10% set aside (10% of the state's allotment of vocational education funds shall be devoted to vocational/special needs projects) in federal vocational education legislation, i.e. PL 90-576 Vocational Education Act of 1968, increasing number of special needs students have been referred to vocational school systems. Policy makers within the state of Massachusetts who are accountable for the delivery of vocational/special education programming are concerned about the increasing and continuing trend of placing special needs students in vocational school systems.

Therefore, the researcher determined that this topic is a vital and pertinent issue worthy of study and deliberation.

Methodologies

The methodology utilized in this study refer to the use of a survey instrument which was mailed to 65 comprehensive and 65 vocational school systems. The selection of these school systems was accomplished in a random fashion utilizing the computer language identified as BASIC. Please note: In reference to the selection of vocational school systems, the criteria of which school systems had five or more vocational course offerings was a decisive factor in their being selected for the sample. The primary reason being that the Division of Occupational Education stipulates that a local education agency has to have five or more Chapter 74 (see definitions in Chapter I) programs in order for their school system to be identified as a vocational school.

In addition to the survey instrument, the researcher conducted on-site visitations to six school systems: three comprehensive and three vocational. The purpose of these visitations was to complement the data generated by the survey instrument and also insure the fact that the data was based on an individual student's progression over a four year period of time.

The survey data was reported by 13 (20%) comprehensive and 19 (29%) vocational school systems.

Findings

The data gathered by the survey instrument revealed that: Within the prototypes 502.1 and 502.2 of both the comprehensive and vocational school systems, 8,423 (63.7% of the total) special needs students from the comprehensive sector were noted and 17,805 (76.4% of the total) students were identified in the vocational school systems.

This data showed the fact that there were more than twice as many special needs students in the vocational sector. However, one must also take into account that there were six more additional school systems which were reported by the vocational delivery system (19 as compared to 13).

For the study as a whole, 13 comprehensive school reported 13,221 special needs students while 19 vocational schools reported 23,293 special needs students.

In the prototypes designated as 502.3 and 502.4 (more restrictive prototypes) the data is similar to that of the information provided for the 502.1 and 502.2 (least restrictive) prototypes. Specifically, the data is as follows: Within the prototypes 502.3 and 502.4 of both the comprehensive and vocational school systems 4,798 (36.3% of 13,221) special needs students from the comprehensive sector were noted and 5,488 (23.5% of 23,293) were identified as

special needs students from the vocational school systems. This data represents the fact that in view of the more restrictive prototypes 502.3 and 502.4, there were more special needs students reported in the vocational sector and slightly less (1,290) special needs students noted as being from the comprehensive sector. The factor though that there were six additional school systems which represented the vocational system might indicate that the vocational schools have "less" special needs students in the more restrictive settings.

It appears from the above data that there are more students in the least restrictive setting from the vocational sector and similarly more students in the more restrictive setting from the vocational sector.

The on-site data documents the fact that 28% of the vocational sector were mainstreamed and 24% of the vocational students changed their prototype to a less restrictive prototype. Within the comprehensive sector 34% of the special needs students achieved less restrictive prototypes. A combination of the mainstream and changed to less restrictive prototypes reveal that the vocational sector's percentage is 51.1% and for the comprehensive system the combined percentages of mainstreamed and changed to less restrictive prototypes is 39.3%. The on-site information therefore substantiates the higher number of vocational special needs students moving to the least restrictive prototypes.

The factor of 43% of the comprehensive sector and 35% in the vocational sector remained in their prototype over a four year period of time suggests that the initial designation of a prototype is correct and that the students benefit from a stable and consistent educational environment. However, these statistics could also suggest that 57% of the students from the comprehensive sector were placed in incorrect prototypes and 65% of the special needs students from the vocational school systems likewise were diagnosed in an inappropriate prototype designation.

Response to Research Question

In response to the research question namely, do special needs students from the comprehensive sector access the least restrictive settings at a quicker pace than their counterparts from the vocational sector, the response is in the affirmative, that of the schools studied, nearly 52% of the special needs students in the vocational sector appear to progress to a least restrictive prototype over a four year period of time as opposed to 40% of special needs students in a comprehensive school. However, in the researcher's point of view the proper identification of a prototype designation offers stability and consistency to special needs students within both the comprehensive and vocational sectors.

The data strongly suggests that the students in the comprehensive sector are initially placed in their proper prototypes because of excellent diagnostic assessment procedures.

Specifically, within the category "stayed in prototype" 42.7% (38 from a total of 89) and 35.7% (35 from a total of 98) for both the comprehensive and vocational sector total 78.4% of special needs students studied in the on-site data examination are appropriately placed in the comprehensive and vocational sector and this factor affirms the validity of the evaluation system which diagnoses and establishes the proper prototype.

These initial decisions deliberated and acted upon in grade 9 "hold up" over a four year period of time and such stability is definitely a plus in the learning process of special needs students.

In view of the data presented in this dissertation, the researcher is prepared to offer these recommendations:

* The local comprehensive and vocational school systems in Massachusetts should collect and maintain their special needs enrollments by grade, prototype and type of program in a more efficient and credible fashion.

The advantage of collecting such data are as follows:

* Scheduling Purposes

There would be an increased knowledge of how many special needs students could be mainstreamed in to;

occupational education, academic studies, counseling services, psychological assistance, bilingual education, physical education, remedial reading and other auxiliary and related school activities.

* Individual Career Selections Within The Mainstream Setting

It is important to signify which academic and occupational course(s) lend themselves to the mainstreaming process. Currently there is a mandate by the Division of Occupational Education, Chapter 731 An Act to Improve Vocational Technical Education, that integration of academic and vocational studies be pursued vigorously and that each school system should have a plan to achieve this objective by June 30, 1992.[55] The above curriculum restructuring implies the development of Applied Academics (i.e. Applied Communications, Applied Math, Principles of Technology, Applied Chemistry and Biology). The intent is to enable the regular and special needs students to understand more readily the applications of their academic studies and the correlation of such to their vocational course offerings. This entire effort of integration of academic and vocational subjects should facilitate and ease the learning needs of special needs students.

* High School Requirements for Graduation

The maintenance of such files would enable special education administrators to validate that special needs students satisfied all the requirements for graduation. Since these requirements are on the increase, it is crucial for the special education administrators to know for certain that all such graduation requirements are met and achieved.

* Staffing Patterns

This category implies that within a regular education class tutors, aides, senior citizens, interpreters and peer tutoring are all forms of supportive assistance which would enable special needs students to become mainstreamed into regular education studies.

The interest of the Early Childhood Certificate is also reflected in the increased credits for a vocational approval teacher (i.e. from 18 to 36 credits). The additional credits required for vocational approval, namely:

* Integration of Academic and Vocational Subjects
* Brain Compatibility for Teaching and Learning
* Technical Assistance in Assessment Procedures
* Computerized Skills for the Vocational Educator[56]

These additional credits will also benefit the future vocational instructors in his/her coping with the learning needs of special needs students.

* Long Range Planning by Grade and Prototype

Examples of long range planning which could facilitate the mainstreaming process is in the area of budget forecasting, adopt cooperative learning strategies, develop curriculum modification, interpret labor needs of business and industry and development of a viable support base for special education services. Such a support base would be in the area of a Parent Advisory Council and other similar community oriented support systems.

* Transition Process of School to Work Would Be Facilitated

Within all the major facets of vocational education and for the comprehensive school systems which have occupational/career oriented course offerings. The current and promising vehicle of transition services from school to work is critical and urgent if special needs students are to become accepted into the market place as wage earners. The vehicle of shadowing, career days, businesses adopt a vocational shop or trade, are all components of the transitional process. Any activity which can facilitate the entrance of a special needs student into an entry level phase of employment/internship opportunities would be a major advance in the field of special education. One example of the transition process is the establishment of the position identified as Job Coach. This position

enables a person to physically accompany a special needs student into the employment sector and provide on the job aid or counsel in having the person adjust to his/her job position. Eventually, the every day presence of the job coach is not required and an appropriate "weaning away" process is conducted.

An additional example of an exemplary transition process is known as a "try on" basis. This specific approach was utilized in the Boston Public School System, and it is described as follows: "Students attend school part time and work part time and by their last year in the program many students are employed full time. Places of employment include Wentworth Institute, Logan Airport and New England Telephone Company. The program provides the realistic opportunity for a student to work in integrated work environments."[57]

* <u>Demographic Research and Report Writing</u>

This category warrants the need for basic demographic statistics and how such data could facilitate the planning of the mainstream process. Such data would include the following:

* Data from the Department of Public Health

Vital Statistics Division

* live births for each community

* Incidence of such births in the area of retardation, physical and sensory impairments may also be obtained from the Department of Public Health.

* Number of students in the community who live with foster parents and are supported by the Department of Social Services

* Number of students in the community who live in community residents which are supported by the Department of Mental Retardation. Such students often attend evening programs of their local school systems.

* The Department of Education has recently established an office whose charge is to document the number of homeless children who are not in any school situation. In addition, this office is collecting data on the deleterious effects of shelters, hotels and motels on such children.[58] This is the type of demographic data which is crucial for any special education administrator for at any point in the future these children will probably be allowed and encouraged to attend public schools. The question of their ability to become mainstreamed would be enhanced by such data.

* The Department of Education has also established an Office of Dropout Prevention.[59] The data from this office would also provide information and strategies for the special education and vocational instructor to

enhance their abilities to effect mainstreaming for the special needs students.

All of the above information could well be documented and disseminated by either the special education administrator or the vocational director. This data would enable these administrators to document such information in various reports to their Superintendent, Superintendent/Director, School Committee and various city/town officials.

This data gathering also addresses the need for immediate actions as well as short (3-6 months) and long range (7 months to 1-3 years) planning. Various school systems are adopting the planning principles which are representative of business and industry; they are conducting "strategic planning". As defined by the Council of Jewish Federations, "long range strategic planning is defined as a management approach to give overall direction to the entire federation system in the most effective deployment of its resources to accomplish its purposes".[60] This type of thinking and planning should be wide spread within the public school system. If strategic planning principles were employed vigorously within the public school policies, the entire issue of deciding and planning which delivery system would be most effective environment for special needs students would be answered in a clear and conclusive manner.

Conclusions

Finally, the data analysis allows for an equitable allocation of resources which would enhance the mainstreaming process. The following outcomes would be realized:

* Increased Staff Development:

  i.e. special education, vocational instructors and academic teachers all learning new and innovative strategies which would enhance the mainstreaming process

* Within the Mass Business Alliance for Educators' recent Report, Every Child A Winner, considerable emphasis is placed upon the need to provide substantial resources for professional enhancement activities. In reference to the need for professional development, this report states in part..."In addition to improving the quality of the educational system, the amount of time spent in education should be increased. To allow sufficient time for professional development (growth and renewal) activities for teachers, for additional academic work and pedagogical experimentation, and for improved integration of social support services, school time should be increased significantly. In some cases as much as twenty percent (20%) or more. This should be accommodated by

modification of the daily schedule, yearly calendar or both.[61]

Currently, the Executive Branch, Legislature and Higher Education Council are all working together to design an Educational Excellence Bill[62] which would translate the above goal of additional professional time into legislative language.

The programmatic options for special needs students who function in the least restrictive setting enable such students to become accepted into a more diverse range of vocational course offerings. The stereotype of such students only succeeding in the culinary arts or hotel/motel industry are long past. The new career options represent the following:

* Computer Aided Drafting Program for Technicians
* Optician Assistant
* Data Entry Operator
* Information Skills: Word Processing abilities
* Entrepreneurial skills within small business/industry

There is an important issue for parents to become aware of, namely become cognizant of all of the above options and seek out strategies by which they could, with the assistance of the administrators and instructional staff, assist special needs students to achieve a least restrictive setting.

All of the above reasons testify to the validity and importance of school systems need to collect and maintain data banks by grade, prototype and type of program.

The vocational options for the students in the more restrictive settings are usually beneficial in the following programmatic options:

* building maintenance programs (shadow mainstream staff and perform light custodial duties)
* culinary arts options (coffee canteen programs)
* horticultural (floral assistant programs)
* child care (child care aids)
* educational programs (tool room attendant)
* carpentry options (lumber yard attendant)
* automotive programs (automotive refurbishing skills)

The vocational school systems have designed and implemented programs in many of the above areas and as a result the occupational data reflects such programmatic options.

A positive finding is that special needs evaluations do in fact determine a correct prototype designation for both the comprehensive and vocational special needs students and

should be complemented and acknowledged for their excellent diagnostic assessments.

The Division of Occupational Education recently established regional vocational assessment centers in five regional vocational high schools. These assessment centers

primary focus is to provide improved diagnostic assessment procedures for regular and special needs students so that within a few years the value of the initial diagnostic assessment will have increased validity for the special needs students four year educational experience.

The two Associate Commissioners of Special and Occupational Education would view the importance of the comprehensive schools systems diagnostic ability and also the ability of the vocational system to pursue the premise of the least restrictive setting as legitimate issues in their policy making/planning functions.

This is stated because the Report noted in End Notes #56 by the Division of Special Education was collaborated with personnel through the four major Divisions of the Department of Education. That is, staff personnel from the Division of Occupational Education and Special Education along with personnel from the Division of School Programs and the Division of Education personnel all collaborate on the Report. This type of collaboration is indicative of positive working relations.

Implications for Further Research

The data which appeared in this dissertation strongly refers to the need for additional research. Such research should be conducted in the following areas:

* increased need for the comprehensive and vocational sector to perfect their data gathering ability in terms of documenting grade, prototype and program information on an annual basis
* need for local comprehensive and vocational school systems to accept the premise of 502.1 and 502.2 prototypes as less restrictive options and 502.3 and 502.4 prototypes as more restrictive programmatic options.
* need for the comprehensive and vocational sector to adopt the premise that mainstreaming includes the prototypes of 502.1, 502.2 and 502.3 designations
* need for the policy makers within the Department of Education to view the issue of the least restrictive setting as a major concern and dedicate and commit resource to achieving that objective (both for the comprehensive and vocational sectors)

Recommendations

The recommendations pertaining to this study are as follows:

* The policy makers of Special Education and Occupational Education should implement the strategies cited in the foregoing section: Implications for Further Research

* To document the findings of this study and report on same to the Associate Commissioner of Occupational and Special Education.
* The researcher will provide an Executive Summary of this study and disseminate same to the Commonwealth of Massachusetts' Special Education and Vocational Education Directors.
* To provide an Executive Summary from the researcher of this study and mail same to all of the relevant vocational special education state wide associations.
* The ensuing dialogue form all of the above activity would ensure a thorough examination of the study's findings and conclusions and create a broad based effort for implementation of the strategies and findings cited in this study.

End Notes

[55] Division of Occupational Education, Regulations for Vocational Technical Education: Chapter 731, An Act to Improve Vocational Technical Education, Quincy, MA, August 19, 1990, 21.

[56] Division of Occupational Education, "Teacher Training Pre-Service Program", Quincy, MA, June 1991.

[57] Division of Special Education, Ibid, 22.

[58] Department of Education, Children without Homes, January, 1990, 6.

[59] Massachusetts Department of Education, Changing Schools and Communities: A Systemic Approach to Dropout Prevention, Quincy, MA, December, 1989.

[60] Council of Jewish Federations, Long Range Strategic Planning in Jewish Federations: Guidelines, New York, NY, 1991, 2.

[61] Massachusetts Business Alliance for Education, Every Child A Winner, Billerica, MA, July, 1991, 20.

[62] Birmingham, Thomas and Mark Roosevelt, In Process, "The Educational Excellence and Accountability Act", Boston, MA, February, 1992, 4.

APPENDIX A

ESTABLISHMENT OF A STATE WIDE TASK FORCE ON THE ISSUE OF SPECIAL NEEDS STUDENTS WHO ATTEND REGIONAL AND COUNTY VOCATIONAL HIGH SCHOOLS

The Commonwealth of Massachusetts
Department of Education

1385 Hancock Street, Quincy, Massachusetts 02169-5183

December 14, 1988

Mr. Louis Bianchi
Horace Mann School
40 Armitage Street
Allston, MA 02134

Dear Mr. Bianchi:

The three program divisions, Occupational Education, Special Education and School Programs, of the Massachusetts Department of Education are examining the issues affecting special education in a vocational technical setting. These issues include the overenrollment of special needs students, a potential cutback of appropriate services for special needs students and the systematic, sometimes inappropriate referral of special needs students to vocational technical schools by sending schools. The Associate Commissioners of Occupational Education, Special Education and Schools Programs have had preliminary, internal discussions on the topic but would now like to expand the dialogue to include school representatives.

We are hopeful that you would join us at a meeting to be held on Friday, February 3, 1989 at Keefe Technical High School, 750 Winter Street, Framingham, MA 01701. If you wish, lunch will be offered at a minimal cost.

Please contact Elaine Cadigan, of my office, at (617) 770-7354 to confirm your participation and if you have any questions.

We look forward to a truly meaningful and productive session.

Sincerely,

David F. Cronin
Associate Commissioner
Division of Occupational Education

/mmr

cc: Mary Beth Fafard
Betty Twomey
Elaine Cadigan

The Commonwealth of Massachusetts
Department of Education

1385 Hancock Street, Quincy, Massachusetts 02169-5183

SPECIAL NEEDS ADVISORY COMMITTEE MEETING

A G E N D A

February 3, 1989

Keefe Technical Regional Vocational School

I.	Introductions	David F. Cronin
II.	Background/Committee Goals	David F. Cronin
III.	Divisional Perspectives - Occupational Education	David F. Cronin
	- Special Education	Mary Beth Fafard
	- School Programs	Betty Twomey
IV	Identification of Critical Issues	Elaine Cadigan
V.	Needs, Proposals, Resolutions	
VI.	Future Steps	

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Mr. Paul Bento
Keefe Technical High School
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North Shore Regional Vocational Technical School
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Mr. Carter Caudle
Quincy Vocational School
Woodward Avenue
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Ms. Mary Jo Santoro
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Mr. Leonard Morley
Marlboro High School
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(508) 485-8100

Mr. Fred Laire
Walpole Public Schools
School Street
Walpole, MA 02081
(508) 668-5400

Mr. David Sampson
Upper Cap Code Vocational Technical School
220 Sandwich Road
Bourne, MA 02532
(508) 759-7711

Mr. Steve Johnson
Northampton Smith Vocational High
80 Locust Street
Northampton, MA 01060
(413) 568-6970

David F. Cronin
Associate Commissioner
Division of Occupational Education

Elaine Cadigan
Bureau of Program Services
Division of Occupational Education

Betty Twomey
Associate Commissioner
Division of School Programs

Mary Beth Fafard
Associate Commissioner
Division of Special Education

APPENDIX B

INTEREST IN THE DATA OF THIS DISSERTATION BY THE ASSOCIATE COMMISSIONERS OF OCCUPATIONAL AND SPECIAL EDUCATION

The Commonwealth of Massachusetts
Department of Education

1385 Hancock Street, Quincy, Massachusetts 02169-5183

December 15, 1988

Dr. Kenneth Parker, Professor
School of Education
University of Massachusetts
Amherst, Massachusetts 01002

Dear Dr. Parker:

This is to inform you that as Associate Commissioners of Special Education and Occupational Education, we are pleased to note the effort and development of Sumner Rotman's dissertation. His topic of analyzing the differences in comprehensive and vocational education as it affects special needs students is an important concern to us.

We look forward to the completion of Mr. Rotman's dissertation and would welcome a discussion of his findings and recommendations.

Sincerely,

Mary-Beth Fafard
Associate Commissioner
Division of Special Education

David F. Cronin
Associate Commissioner
Division of Occupational Education

:bgr

APPENDIX C

RANDOM SAMPLING MEASURE
WHICH WAS UTILIZED IN SELECTING THE
65 COMPREHENSIVE SCHOOL SYSTEMS
AND THE SELECTION PROCESS FOR
DETERMINING THE 65 VOCATIONAL SCHOOL SYSTEMS

Random Sampling Procedure for the Selection of 65 Comprehensive School Systems

This study required identification of 65 comprehensive and 65 vocational school districts (from a total of 376) that would proportionately represent geographical and socioeconomic factors across the state.

At the time of decision making for the analysis, the Massachusetts Department of Education coordinated services with school districts by organizing the state into six geographical regions. These were northeast, southeast, central Massachusetts, northwest, greater Springfield, and greater Boston.

In addition, school districts were also identified by the state in terms of socioeconomic factors known as kind of community (KOC). There were seven KOC's: economically developed suburbs (EDS), growth communities (GRC), rural economic centers (REC), residential suburbs (RES), resort-retirement-artistic (RRA), small rural communities (SRC), and urbanized centers (URC).

These regional and KOC factors were used in the selection of the 65 comprehensive and 65 vocational school districts that would receive surveys. The random sampling method and a data file containing region and KOC identifiers for each school district expedited selection.

Random sampling is a statistical formula available in BASIC, a computer programming package. This feature was

utilized in a program that asked the number of records in the database, and the number of districts by region and KOC to be selected. The program was run with the LEAID file, the data base was a list containing eleven school districts per region with cross representation from each KOC.

Selection Process Utilized in Determining the 65 Vocational Schools

The criteria of a vocational school in the Commonwealth of Massachusetts is that the school has to have five or more vocational offerings for it to be identified as a vocational school. The Directory of Chapter 74 Vocational Approval Programs of Massachusetts lists 65 vocational school systems which satisfied the criteria. The population used to define this study group is commonly referred to as a "sample of the whole", i.e. "a population is defined as a complete set of individuals or objects having some common observable characteristic." Op. Cit., p. 56

Utilizing the entire population (N=65) of vocational schools offered the researcher a great advantage over a sample of this population since the groups "representativeness" is assured. However, the population of comprehensive high schools (N=410) was sampled because of its larger number.

APPENDIX D

LIST OF 65 COMPREHENSIVE AND 65 VOCATIONAL SCHOOL SYSTEMS WHICH RECEIVED THE SURVEY

Comprehensive School Systems which Received the Survey

Acton-Boxboro Regional High School

Bellingham High School

Billerica High School

Brookfield High School

Buckland Colrain Shelburn Regional High School

Cambridge Rindge and Latin High School

Chicopee High School

Dighton Rehoboth Regional High School

Douglas High School

Dover Sherborn Regional High School

Dracut High School

East Longmeadow High School

Essex High School

Fairhaven High School

Gosnold High School

Granby High School

Granville High School

Greater Lawrence Regional Vocational High School

Greater New Bedford Regional Vocational High School

Greenfield High School

Groton-Dunstable Regional High School

Hingham High School

Holyoke High School

Hull High School

King Philip Regional High School

Lawrence High School

Lenox High School

Leverett High School

Leyden High School

Lincoln Sudbury Regional High School

Manchester High School

Mauset Regional High School

Maynard High School

Melrose High School

Milton High School

Mohawk Trail Regional High School

Needham High School

New Salem-Wendell High School

Newbury High School

Newburyport High School

Norfolk County Agricultural High School

North Middlesex Regional High School

Northborough High School

Occupational Resource Center

Old Rochester Regional High School

Palmer High School

Pathfinder Regional Vocational High School

Pelham High School

Pioneer Valley Regional High School

Pittsfield High School

Richmond High School

Sandwich High School

Southbridge High School

Southern Berkshire Regional Vocational High School

Spencer East Brookfield High School

Sterling High School

Stoughton High School

Swansea High School

Tri County Regional Vocational High School

Watertown High School

Watley High School

Wilbraham High School

Winthrop High School

Vocational School Systems which Have More than Five Chapter 74 Vocational Approved Courses of Study and Therefore Received the Survey

Assabet Valley Regional Vocational Technical High School

Attleboro Vocational Technical High School

Bay Path Regional Vocational Technical High School

Berkshire Hills Regional Vocational Technical High School

Beverly High School

Blackstone Valley Regional Vocational Technical High School

Blue Hills Regional Vocational Technical High School

Braintree High School

Bristol County Agricultural High School

Bristol Plymouth Vocational Technical High School

Brockton High School

Cambridge Rindge and Latin High School

Cape Cod Regional Vocational Technical High School

Chicopee High School

Dighton Rehoboth Regional Technical High School

Essex County Agricultural High School

Everett Vocational Technical High School

Fall River High School (Durfee)

Franklin County Vocational Technical High School

Gloucester Vocational Technical High School

Greater Lawrence Regional Vocational Technical High School

Greater Lowell Regional Vocational Technical High School

Greater New Bedford Regional Vocational Technical High School

Hubert Humphrey Occupational Resource Center

King Philip Regional Vocational Technical High School

Leominster Trade High School

Lynn Vocational Technical High School

Malden High School

Medford Vocational Technical High School

Milford High School

Minuteman Regional Vocational Technical High School

Montachusett Regional Vocational Technical High School

Nashoba Valley Regional Vocational Technical High School

Newton Vocational Technical High School

Norfolk County Agricultural High School

North Shore Regional Vocational High School

Northampton-Smith Vocational Technical High School

Northeast Metropolitan Regional Vocational Technical High School

Northern Berkshire Vocational Technical High School

Old Colony Regional Vocational Technical High School

Pathfinder Regional Vocational Technical High School

Peabody School for Girls

Peabody Vocational Technical High School

Plymouth-Carver Regional Vocational Technical High School

Putnam Trade School

Quincy Vocational Technical High School

Salem High School

Shawsheen Valley Regional Vocational Technical High School

Silver Lake Regional High School

Somerville Comprehensive High School

South Middlesex Regional Vocational Technical High School

South Shore Regional Vocational Technical High School

Southeastern Regional Vocational Technical High School

Southern Worcester County Regional Vocational Technical High School

Tantasqua Regional High School

Tri County Regional Vocational Technical High School

Upper Cape Cod Regional Vocational Technical High School

Wakefield High School

Waltham Vocational Technical High School

Westfield Trade High School

Weymouth Vocational Technical High School

Whittier Regional Vocational Technical High School

William Dean Vocational Technical High School

Worcester Trade High School

APPENDIX E

LETTER OF INTRODUCTION AND THE SURVEY INSTRUMENT WHICH WAS MAILED TO THE 65 COMPREHENSIVE AND 65 VOCATIONAL SCHOOL SYSTEMS

September 20, 1988

Dear Superintendent:

I am a doctoral student at the University of Massachusetts, School of Education, Amherst, Massachusetts and have designed a study which would ascertain whether special needs students excel faster in comprehensive or vocational school settings. The criteria I have utilized in this regard is the movement of the special needs student through the aegis of the prototype system, i.e., 502.1 - 502.4. Would you be so kind as to refer this survey to the Director of Special Education or any other appropriate administrator on your staff.

If you so desire, I would be pleased to, upon completion of the dissertation, send you an Executive Summary of my findings. Please indicate your intention to receive the highlights on the attached form. In addition, all the data from each of the randomly selected (65) comprehensive and randomly selected (65) vocational school systems will be maintained in a confidential manner. A coding system for computerized purposes will reflect the identity of each school system who responds to the study. The coding system itself will only be known to my computer consultant who will keep the data in a secure fashion.

Please call me at my office, 617-929-8530, 8591, if you wish any further clarification.

Sincerely,

Sumner Rotman

RSVP FORM

I wish to receive the Executive Summary of Sumner Rotman's state wide survey of special needs students in randomly selected comprehensive and vocational school systems.

_____yes _____no

NAME_____

POSITION_____

SCHOOL SYSTEM_____

ADDRESS_____

TELEPHONE #_____

I have referred the above study to the following person on my staff.

NAME_____

POSITION_____

SCHOOL SYSTEM_____

ADDRESS_____

TELEPHONE #_____

Please return this RSVP Form to:

Sumner Rotman
39 Frederickson Drive
Randolph, MA 02368
O - 617-929-8530, 8591
H - 617-961-4862

Thank you again for your cooperation in my dissertation study.

ON SITE VALIDATION FORM (continued)

PART C:
Complete this section if from one year to another there is a change.

1. Which year? _____

2. What is the change?

_____ Changed prototype (which one? _____
_____ Dropped out
_____ Was Expelled
_____ Transferred to private school
_____ Transferred to feeder school
_____ Repeated same year
_____ Other (specify:_____

PART D:
Complete this section if change occurred in the succeeding school year.

1. Which year? _____

2. What is the change?

_____ Changed prototype (which one? _____
_____ Dropped out
_____ Was expelled
_____ Transferred to private school
_____ Transferred to feeder school
_____ Repeated same year
_____ Other (specify:_____

PART E:
Complete this section if change occurred in the succeeding school year.

1. Which year? _____

2. What is the change?

_____ Changed prototype (which one? _____
_____ Dropped out
_____ Was expelled
_____ Transferred to private school
_____ Transferred to feeder school
_____ Repeated same year
_____ Other (specify:_____

NOTES:

Date:_____

Signature:_____

APPENDIX F

RATIONALE FOR ON-SITE VISITATIONS

The Commonwealth of Massachusetts
University of Massachusetts-Boston
Harbor Campus
Boston, Massachusetts 02125-3393

MEMORANDUM

To: Dr. Mary Beth Fafard
Dr. David Cronin

From: Sumner Rotman

Re: Additional Activity Related to my Doctoral Proposal

Date: October 27, 1988

On October 27 I conferred by telephone with Dr. Kenneth Parker and he approved the additional activity of my performing on site interviews with those school systems which report significant discrepancies from one year to the next. The type of discrepancies would be for example special needs students going from prototype 502.4-502.2 in one year, or other dramatic changes, from 502.3-502.1. This interview data along with the mathematical information provided on the survey instrument will be reported and analyzed in my actual dissertation.

In terms of the discussion relative to the fact that special needs students may leave a class, i.e. grade 9, 10, 11 or 12 for any number of reasons, such as transfer to a private school, drop out of school, etc., I will therefore identify this issue as a limitation of my study. In addition I will discuss this point with the appropriate personnel from the Center of Survey Research, University of Massachusetts-Boston, for these individuals are assisting me in the statistical design and interpretation of the data regarding the information generated on my survey instrument.

For your review and consideration I have enclosed a revised letter of endorsement. Please feel free to modify this letter in any way you deem appropriate. I will contact your secretary regarding the preparation of your endorsement which would accompany the survey instrument.

Thank you for your interest and helpful input regarding my attempts to obtain reliable information which would be germaine to my dissertation.

Approved - Kenneth A. Parker 11-4-88

APPENDIX G

ON SITE VALIDATION INSTRUMENT

ON-SITE VALIDATION FORM

Name of student: _____

Name of school district: _____ LEA Code: _____

Address of school district: _____

PART A: Identify the four year cohort.

year 1	year 2	year 3	year 4

Part B: Prototype and grade placement during cohort years.

NUMBER OF STDNTS IN CH74 PROGRAMS	OCT. 78	OCT. 79	OCT. 80	OCT. 81	OCT. 82	OCT. 83	OCT. 84	OCT. 85	OCT. 86	OCT. 87	OCT. 88
PROTOTYPE 502.1											
1. Grade 9											
2. Grade 10											
3. Grade 11											
4. Grade 12											
PROTOTYPE 502.2											
1. Grade 9											
2. Grade 10											
3. Grade 11											
4. Grade 12											
PROTOTYPE 502.3											
1. Grade 9											
2. Grade 10											
3. Grade 11											
4. Grade 12											
PROTOTYPE 502.4	- Do not include students in prototype 502.4(1)										
1. Grade 9											
2. Grade 10											
3. Grade 11											
4. Grade 12											

NOVEMBER 16

PLEASE NOTE: DUE TO AN UNEXPECTED DELAY IN MAILING MY DOCTORAL SURVEY TO THE SCHOOL SYSTEMS, THE DATE BY WHICH I WOULD APPRECIATE THE RETURN OF THE ENCLOSED FORM IS DECEMBER 23rd.

THANK YOU FOR YOUR INTEREST AND COOPERATION IN THIS MATTER, AND WISHING YOU A PLEASANT HOLIDAY SEASON, I AM

SINCERELY,

Sumner Rotman

SUMNER ROTMAN

APPENDIX H

COMPOSITE FORM WHICH REPRESENTS A CUMULATION OF ALL THE DATA GENERATED BY THE ON SITE VALIDATION ACTIVITY

COMPREHENSIVE

School District	# Students Graduated	# Students Transfered Prv Fdr	# Students Dropped Out	# Students Expelled	# Repeated Year	Stayed In # From Yr1-Yr2

VOCATIONAL

School District	# Students Graduated	# Students Transfered Prv Fdr	# Students Dropped Out	# Students Expelled	# Repeated Year	Stayed In # From Yr1-Yr2

Same Prototype		Moved Up			Moved Down		
# From Yr2-Yr3	# From Yr3-Yr4	# From Yr1-Yr2	# From Yr2-Yr3	# From Yr3-Yr4	# From Yr2-Yr1	# From Yr3-Yr2	# From Yr4-Yr3

Same Prototype		Moved Up			Moved Down		
# From Yr2-Yr3	# From Yr3-Yr4	# From Yr1-Yr2	# From Yr2-Yr3	# From Yr3-Yr4	# From Yr2-Yr1	# From Yr3-Yr2	# From Yr4-Yr3

APPENDIX I

A LISTING OF THE SCHOOL SYSTEMS WHICH RESPONDED TO THE SURVEY: COMPREHENSIVE AND VOCATIONAL

Comprehensive School Systems

Boston Public Schools, Boston, MA

Brockton Public Schools, Brockton, MA

Cambridge Rindge and Latin High School, Cambridge, MA

Everett Public Schools, Everett, MA

Fall River Public Schools, Fall River, MA

Malden Public Schools, Malden, MA

Melrose Public Schools, Melrose, MA

Quincy Public Schools, Quincy, MA

Revere Public Schools, Revere, MA

Saugus Public Schools, Saugus, MA

Tamtasqua Regional High School, Sturbridge, MA

Wakefield Public Schools, Wakefield, MA

Westfield Public Schools, Westfield, MA

Vocational School Systems

Blackstone Valley Regional Vocational High, Upton, MA

Blue Hills Regional Vocational High School, Canton, MA

Bristol County Agricultural High School, Dighton, MA

Cape Cod Regional Vocational High School, Harwich, MA

Diman Regional Vocational High School, Fall River, MA

Franklin County Technical High School, Turners Falls, MA

Greater Lawrence Regional Vocational High, Andover, MA

Greater Lowell Regional Vocational High, Tyngsboro, MA

Greater New Bedford Regional Vocational, New Bedford, MA

Lynn Vocational Technical High School, Lynn, MA

Minuteman Regional Vocational High School, Lexington, MA

Norfolk County Agricultural High School, Walpole, MA

North Shore Regional Vocational High School, Beverly, MA

Old Colony Regional Vocational High School, Rochester, MA

Shawsheen Valley Regional Vocational High, Billerica, MA

Smith Vocational High School, Northampton, MA

South Shore Vocational Technical High School, Hanson, MA

Southeastern Regional Vocational High, South Easton, MA

Upper Cape Cod Regional Vocational High School, Bourne, MA

APPENDIX J

BREAKOUT OF SPECIFIC DATA

GENERATED BY THE ON-SITE INFORMATION

Quincy High School, Quincy, Mass.

Stayed in Prototype	17
Dropped Out	3
Mainstreamed	4
Changed Prototype	
Less	11
More	2

Melrose High School, Melrose, Mass.

Stayed in Prototype	11
Dropped Out	0
Mainstreamed	1
Changed Prototype	
Less	9
More	9

Saugus High School, Saugus, Mass.

Stayed in Prototype	10
Dropped Out	2
Mainstreamed	
Changed Prototype	
Less	10
More	

Summary: Comprehensive Schools

Stayed in Prototype	38
Dropped Out	5
Mainstreamed	27
Changed Prototype	
Less	30
More	11

Blue Hills Regional Vocational High School, Canton, Mass.

Stayed in Prototype	14
Dropped Out	0
Mainstreamed	0
Changed Prototype	
Less	10
More	6

Minuteman Regional Vocational High School, Lexington, Mass.

Stayed in Prototype	8
Dropped Out	1
Mainstreamed	17
Changed Prototype	
Less	3
More	0

South Shore Regional Vocational High School, Hanover, Mass.

Stayed in Prototype	13
Dropped Out	4
Mainstreamed	10
Changed Prototype	
Less	10
More	2

Summary: Vocational Schools

Stayed in Prototype	35
Dropped Out	5
Mainstreamed	27
Changed Prototype	
Less	23
More	8

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